

AD-A186 002

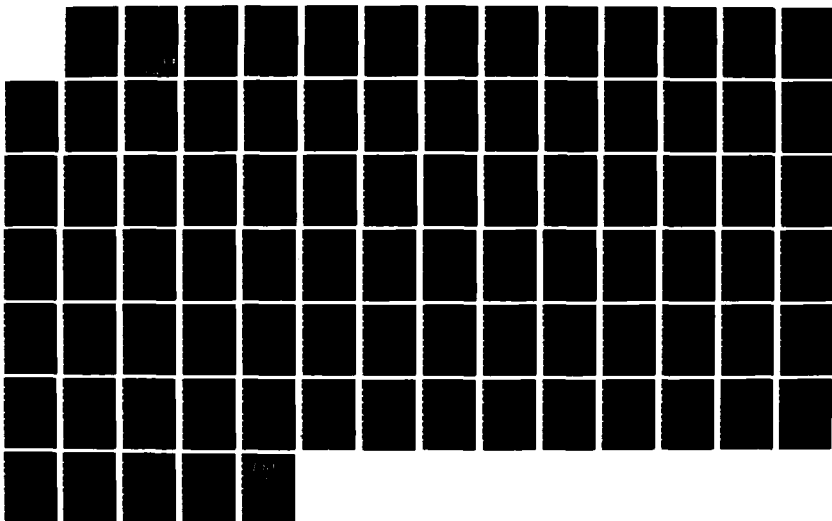
MINNESOTA WATER ALLOCATION LAW VOLUME 1 COMMENTARY ON  
AND ABSTRACTS OF TREATIES LEGISLATION AND RULES(U)  
ARNDORFER ASSOCIATES INC EAGAN MN SEP 87

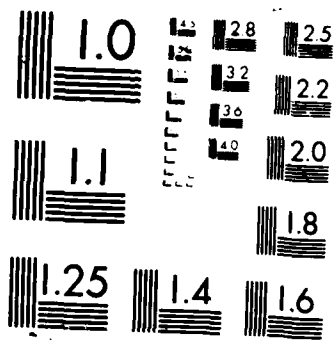
1/1

UNCLASSIFIED

F/G 5/4

NL





XEROCOPY RESOLUTION TEST CHART

AD-A186 002

MINNESOTA WATER ALLOCATION LAW

VOLUME 1

COMMENTARY ON AND ABSTRACTS OF  
TREATIES, LEGISLATION AND RULES

Prepared for:

U.S. ARMY CORPS OF ENGINEERS  
St. Paul District  
1135 U.S. Post Office and Custom House  
St. Paul, Minnesota 55101

Prepared by:

ARNDORFER ASSOCIATES, INC.  
4369 Rahn Road  
Eagan, Minnesota 55122  
(612) 452-3109

September, 1987

DTIC  
ELECTE  
NOV 12 1987  
S D E

This document has been approved  
for public release and using the  
distribution is unlimited.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

AD-A186 002

## REPORT DOCUMENTATION PAGE

Form Approved  
OMB No 0704-0188  
Exp Date Jun 30, 1986

1a REPORT SECURITY CLASSIFICATION <u>Unclassified</u>			1b RESTRICTIVE MARKINGS		
2a SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION / AVAILABILITY OF REPORT  Approved for public release; distribution <u>unlimited</u>		
2b DECLASSIFICATION / DOWNGRADING SCHEDULE			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			7a. NAME OF MONITORING ORGANIZATION  U.S. Army Engineer District, St Paul		
6a. NAME OF PERFORMING ORGANIZATION  Arndorfer Associates Inc.		6b. OFFICE SYMBOL (If applicable)	7b. ADDRESS (City, State, and ZIP Code)  1135 USPO & Custom House St Paul, Minnesota 55101-1479		
6c. ADDRESS (City, State, and ZIP Code)  4369 Rahn Road Eagan, Minnesota 55122		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER			
8a. NAME OF FUNDING / SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)	10. SOURCE OF FUNDING NUMBERS		
8c. ADDRESS (City, State, and ZIP Code)		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) MINNESOTA WATER ALLOCATION LAW; Volume I Commentary on and abstracts of treaties, legislation and rules.					
12. PERSONAL AUTHOR(S)					
13a. TYPE OF REPORT Final		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) September 1987	
15. PAGE COUNT					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	WATER RESOURCES MINNESOTA TREATIES LEGISLATION		
19. ABSTRACT (Continue on reverse if necessary and identify by block number)					
<p>The purpose of this document is to provide a single reference, in two volumes, that provides information pertaining to International, Federal, regional, State, tribal, and local agreements that affect water availability and distribution in Minnesota and all of its political subdivisions.</p> <p>The study scope is the entire state of Minnesota, as well as examination of existing multi-state agreements. Research included contact with numerous Federal, State, and bi-state agencies.</p> <p>Volume 1 presents a summary of the findings on water allocation in Minnesota. Included is an overview of water allocation and abstracts of various laws, rules, and regulations.</p>					
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION <u>Unclassified</u>		
22a. NAME OF RESPONSIBLE INDIVIDUAL			22b. TELEPHONE (Include Area Code)		22c. OFFICE SYMBOL

**MINNESOTA WATER ALLOCATION LAW**

**VOLUME 1**

**COMMENTARY ON AND ABSTRACTS OF  
TREATIES, LEGISLATION AND RULES**

Prepared for:

**U.S. ARMY CORPS OF ENGINEERS**  
St. Paul District  
1135 U.S. Post Office and Custom House  
St. Paul, Minnesota 55101



Prepared by:

**ARNDORFER ASSOCIATES, INC.**  
4369 Rahn Road  
Eagan, Minnesota 55122  
(612) 452-3109

September, 1987

<b>Accession For</b>	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
INTRODUCTION	I- 1
Purpose and Scope	I- 1
Data Collection and Report Organization	I- 1
Summary of Findings	I- 1
OVERVIEW	I- 3
INTERNATIONAL TREATIES, CONVENTIONS AND PROTOCOLS	I- 7
Organizational Structure of the International Joint Commission	I- 7
Treaty Between the United States and Great Britain Relating to Boundary Waters, and Questions Arising between the United States and Canada	I- 9
Convention and Protocol	I-10
International Boundary Waters	I-11
Commentary on International Agreements	I-11
INDIAN WATER RESOURCES	I-13
Rights of Indians	I-13
Domestic Water Supply on Reservations	I-14
Ground water sources	I-16
Surface water sources	I-16
Commentary on Indian Water Resources	I-17
DEPARTMENT OF NATURAL RESOURCES	I-19
General	I-19
Statewide Priority	I-19
Maintenance Note to Reader	I-19
Authority over Water Supply Districts	I-20
Legal Safeguards to Maintain Public Water Supplies	I-20
Statewide Water Information System	I-21
Conflict Resolution Procedures	I-21
Chapter 105, Minnesota Statutes	I-23
Chapter 6115, Minnesota Rules	I-25
Constraints on State Authority	I-26
International Treaties	I-26
Implications for State Allocation	I-26
Commentary on Constraints on State Authority	I-27
WATERSHED DISTRICTS, WATER USER DISTRICTS, AND WATER SUPPLY DISTRICT LEGISLATION	I-29
Chapter 112, Minnesota Watershed Act	I-29
Chapter 358 of the 1987 Regular Session	I-30
Chapter 110A, Rural Water User Districts	I-31
Chapter 116A, Public Water and Sewer Systems	I-32
Chapter 452, Municipal Ownership	I-33
Formation of Water Supply Districts in Minnesota	I-34
Rural Water User Districts	I-35

**TABLE OF CONTENTS**  
(Continued)

<u>Section</u>	<u>Page</u>
MINNESOTA DEPARTMENT OF HEALTH	I-37
Chapter 144, State Commissioner of Health	I-37
Chapter 144.381 to 144.387,	
Safe Drinking Water Act of 1977	I-38
Chapter 4720, Public Water Supplies	I-39
Chapter 4725 Water Well Construction Code	I-41
PROCEDURES FOR WATER SUPPLY EMERGENCIES	I-43
Memorandum of Agreement	I-44
SUMMARY OF AGENCY INVOLVEMENT, NEW WATER SUPPLY	I-47
Waiver Power and Timing of Approvals	I-49
Final Caution	I-49
List of Watershed Districts in Minnesota as of	
November, 1986	I-50
REFERENCES REVIEWED	I-53
INDEX TO VOLUME I	I-57
APPENDIX A, SCOPE OF WORK	A- 1

## LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Minnesota Permit and Approval Process	I- 5



## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Functional Classification of Water Resources in Minnesota	I- 3
2. Crystalline Rock Aquifers of Archean and Proterozoic Age	I-15

## INTRODUCTION

## **INTRODUCTION**

### **PURPOSE AND SCOPE**

The purpose of this document is to provide a single reference, in two volumes, that provides information pertaining to International, Federal, regional, State, tribal and local agreements that affect water availability and distribution in Minnesota and all of its political subdivisions.

The study scope is the entire State of Minnesota, as well as examination of existing multi-state agreements. Accordingly, research for this document included contact with numerous Federal, State and bi-state agencies. The following agencies were contacted or reviewed the draft of this report:

- International Joint Commission - Washington, D.C.
- Bureau of Indian Affairs - Washington, D.C. and Minneapolis, Minnesota
- Corps of Engineers - St. Paul, Minnesota
- Indian Health Service - Bemidji, Minnesota
- U.S. Geological Survey - St. Paul, Minnesota
- Minnesota-Wisconsin Boundary Area Commission - Hudson, Wisconsin
- Minnesota Department of Natural Resources - St. Paul, Minnesota
- Minnesota Department of Health - Minneapolis, Minnesota
- Minnesota Water Resources Board - St. Paul, Minnesota
- Minnesota State Planning Agency - St. Paul, Minnesota
- Minnesota Attorney General's Office - St. Paul, Minnesota

### **DATA COLLECTION AND REPORT ORGANIZATION**

Data collected for these volumes result from three primary sources:

1. Review of existing legislation, court rulings and published rules and regulations available in various law libraries;
2. Personal and telephone interviews with key informants in the several agencies; and
3. Review of secondary sources provided by the various agencies and informants.

The materials were then organized into two volumes. Volume I presents a summary of the findings on water allocation in Minnesota. This includes an overview of water allocation in Minnesota and abstracts of various laws, rules and regulations. The second volume contains copies of the legislation, rules and regulations pertinent to emergency water planning. Each of the volumes are organized by agency involved in the water allocation process.

### **SUMMARY OF FINDINGS**

The overall impression of the water allocation process in Minnesota is that, from a legislative and regulatory perspective, it is reasonably well prepared to face a water emergency. But how well those institutions are prepared to implement action in a emergency goes beyond the purpose of these volumes. Within this perspective, the following lists the major finding of the report.

First, there are three different types of water resources in the State. These are 1) international boundary waters where use is constrained by treaty, 2) waters on and under Indian reservations also constrained by treaty and court rulings, and 3) waters controlled by the State of Minnesota. To be precise, international boundary waters are waters of the State of Minnesota, but have some restrictions on their use, as is explained in this volume.

Waters of the State of Minnesota are allocated through a regulatory process wherein the Department of Natural Resources and various Watershed Districts (soon to become Soil and Water Resource Districts) are the primary agencies. The Department of Health approves the plan, the water source, raw and finished water quality for each domestic water supply. No license is required by that agency.

Minnesota statutes provide for multiple avenues for establishing new water supply districts, but only one seems to have been used to date. The different mechanisms allow for water supply districts that are wholly contained in a single county and others where the proposed district falls into more than one county. These different mechanisms are discussed later in this volume.

Minnesota has an established mechanism for declaring a time of "Critical Water Shortage" that originates with the Governor. Such a declaration triggers emergency powers vested with the Commissioner of Natural Resources. Under such an emergency, the Commissioner has the power to force water supply districts to conserve water if such conservation measures are not implemented voluntarily. The Commissioner's power at such times appears to be sufficient to assure water conservation in all affected areas.

Another aspect of the water allocation system in Minnesota that affords protection to domestic water supplies is the priority system established by statute. Under legislation, domestic water supply is the highest priority; other uses must be curtailed during periods of water shortage.

Finally, statutes empower the Commissioner of Natural Resources to waive parts of the administrative rules and regulations during periods of water emergency to assure minimal disruption of domestic water supply. The waiver is expressed available when it is in the "public interest". The waiver streamlines the normal permit process and reduces the time necessary to obtain the requisite appropriation permit.

## OVERVIEW

## OVERVIEW

The emergency water planner needs to be cognizant of three separate sets of legislation, rules and regulations during a time of critical water shortage:

1. Appropriation of water
2. Approval of the system
3. Operation of the system

Each of these different aspects involve multiple agencies, each with different rules and procedures. These legal requirements apply to all waters of the state. But the Canadian Government and the various Indian Tribes have other rights that impose constraints on water appropriation in certain, albeit limited, geographic parts of the state.

In terms of water appropriation, it is best to think in terms of three different sets of water resources within the State of Minnesota. These are:

1. International Boundary Waters, e.g., Lake of the Woods, Rainy River, Lake Superior;
2. Waters on and under Indian Reservations; and
3. Waters of the State.

Figure 1 presents this classification graphically.

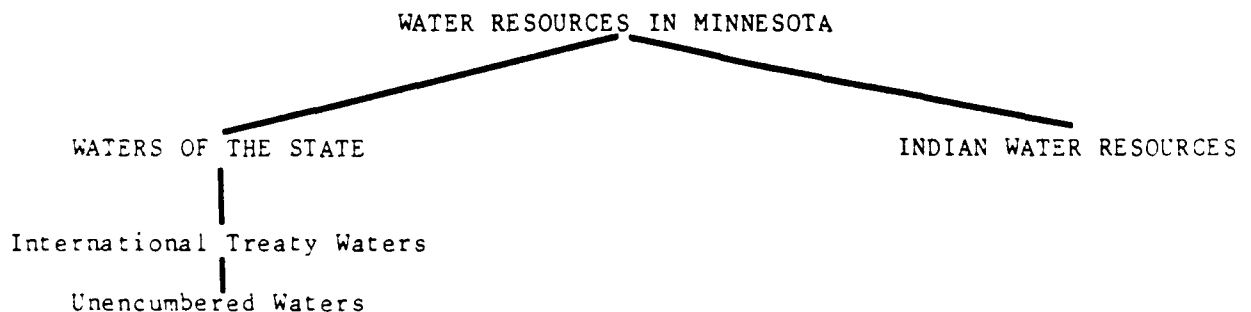


FIGURE 1. Functional Classification of Water Resources in Minnesota

International Boundary Waters are waters of the State, but waters that have certain treaty rights shared with Canada. Later sections of the document present a summary of these rights.

Indian Reservations have rights that are more inclusive and place more restrictions on water allocation. Legal precedent, established by the United States Supreme Court, recognize that Indians retain the right to as much water as they can beneficially use by virtue of their treaties with the United States Government.

Accordingly, the emergency water planner must exercise caution when searching for new water supplies near the Canadian border and near Indian Reservations.

Once a potential water supply has been identified, then legislation, rules and regulations establish three different sets of approvals that are necessary:

1. right to appropriate water from a specific water body,
2. approval of the plan, water source, raw and finished water quality, and
3. right to construct in a waterway.

Appropriation rights and the permitting process receive the focus in this document. The approval to construct in a waterway must be approved by the U.S. Army Corps of Engineers (for Federal waters) and also by the Minnesota Department of Natural Resources (DNR), the local Soil and Water Resources District (Watershed District), when it exists, and by the local governmental unit.

The right to appropriate waters of the State is subject to approval by two separate governmental units in Minnesota:

1. Department of Natural Resources, and
2. Local Soil and Water Resources Board.

These agencies have largely parallel authority and each must be dealt with separately. Table 1 presents a graphic illustration of the permit and approval process for domestic water supply.

In order to construct and operate a water supply system, the State of Minnesota Department of Health must approve the plan, the water source, raw and finished water quality. No license is required. During operation, the Department of Health monitors the operation of the facility. At times of critical water shortage, the Department of Natural Resources has authority to assure that non-essential water use is curtailed.

The following sections of this document detail the legal and regulatory framework concerning water supply systems in Minnesota. Appendix A contains the Scope of Work for this research project.

TABLE 1  
Minnesota Permit and Approval Process

ACTION	CORPS OF ENGINEERS	DEPARTMENT OF NATURAL RESOURCES	SOIL AND WATER RESOURCES DISTRICT	DEPARTMENT OF HEALTH
Construct in a waterway	Permit	Permit	Permit/Approval	-
Appropriate for domestic water supply	-	Permit	Permit/Approval	Approval
Contingency plan for water shortage	-	Required	-	-
Emergency plan to protect public supplies	-	-	-	Approval
Approval of raw and finished water quality	-	-	-	Approval
Operation of water supply system	-	-	-	Approval
Annual report on water appropriation	-	Required	-	Required



INTERNATIONAL TREATIES, CONVENTIONS  
AND PROTOCOLS

## ORGANIZATIONAL STRUCTURE OF THE INTERNATIONAL JOINT COMMISSION

The International Joint Commission (IJC) is an organization established by treaty. It is composed of six members. Three represent the United States and three represent Canada. In addition to the Commission, there are several boards that have an interest in at least parts of the State of Minnesota.

According to the original 1910 treaty, the IJC has jurisdiction over "waters from main shore to main shore of the lakes and rivers and connecting waterways, or the portions thereof, along which the international boundary between the United States and the Dominion of Canada passes including all bays, arms and inlets thereof, but not including tributary waters which in their natural channels would flow into such lakes, rivers and waterways or the waters of rivers flowing across the boundary".

### INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL

The Board was formed in 1914 to supervise the construction of a control structure on the St. Marys River constructed for power purposes and to assume responsibility for regulating Lake Superior levels. This is accomplished by implementing plans approved by the IJC governing discharge of water through the compensating works and power canals.

### INTERNATIONAL GREAT LAKES LEVELS BOARD

In 1979 the Commission established a Board to assist in gathering information on matters affecting Great Lakes water supplies, levels and flows, and to assist in public information and public involvement.

### INTERNATIONAL GREAT LAKES WATER QUALITY BOARD

The Board is the principle advisor to the IJC under the 1978 Great Lakes Water Quality Agreement. The Board assists in the exercise of the powers and responsibilities assigned to the Commission under the agreement relating to the water quality of the Great Lakes, and the assessment of progress made by the Parties toward achieving the goals of the agreement.

### INTERNATIONAL GREAT LAKES ADVISORY BOARD

This Board is the scientific advisor to the Commission and the Water Quality Board. Specifically, the Board is responsible for developing recommendations on matters relating to research and the development of scientific knowledge pertinent to the identification, evaluation and resolution of current and anticipated problems relating to water quality in the Great Lakes basin ecosystem.

#### INTERNATIONAL RAINY LAKE BOARD OF CONTROL

The Board supervises the operation of the International Falls-Fort Francis Dam on the Rainy River and Kettle Falls Dam on Namakan Lake to regulate the levels of Rainy and Namakan Lakes according to regulation plans approved by the IJC. Whenever the level of the lake rises above elevation 1061 sea-level datum or falls below elevation 1056 sea-level datum the rate of total discharge of water from the lake shall be subject to the approval of this Board.

#### INTERNATIONAL LAKE OF THE WOODS BOARD OF CONTROL

The Board has the responsibility for the regulation of the rate of discharge of water from Lake of the Woods when the lake levels either exceed or fall below certain proscribed levels. Although the Board is appointed by Governments, it also reports to the IJC.

#### ADVISORY BOARD ON POLLUTION OF RAINY RIVER AND LAKE OF THE WOODS

This Board was charged with determining the level of pollution, its causes and effects, in the Rainy River and Lake of the Woods watersheds.

#### INTERNATIONAL RED RIVER WATER POLLUTION BOARD

The Board is charged with determining the level and the causes and effects of pollution in the Red River watershed.

#### INTERNATIONAL SOURIS-RED RIVERS ENGINEERING BOARD

The Board was established to investigate and make recommendations on a number of matters including water requirements, further uses and apportionment. The Board was also asked to prepare plans of mutual advantage to the two countries for the water of the Souris and Red River basins.

NAME: TREATY BETWEEN THE UNITED STATES AND GREAT BRITAIN  
RELATING TO BOUNDARY WATERS, AND QUESTIONS ARISING  
BETWEEN THE UNITED STATES AND CANADA  
EFFECTIVE DATE: May 13, 1910  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: United States Department of State, Dominion of Canada  
WATERSHED: Lake Superior; Lake of the Woods; Red, Rainy, and Pigeon  
Rivers (All International boundary waters and waters  
flowing into and out of each country)

ABSTRACT:

Article VIII establishes the authority of the International Joint Commission over use, obstruction, or diversion of boundary waters and waters flowing into and out of each country. It establishes the precedence for the use of water as:

1. domestic and sanitary purposes;
2. navigation, including service of navigation canals;
3. uses for power and irrigation.

In Article II, the United States and Canada each reserve jurisdiction and control over the temporary or permanent use and diversion of waters in their own countries for waters flowing into and out of each country. When injury is done the other party, each country has access to the legal remedies of the other country. Existing uses are grandfathered, with some restrictions.

Article III provides that future uses, obstructions and diversions of boundary waters, whether temporary or permanent, must have the approval of both governments and the International Joint Commission. This is not intended to limit or interfere with ordinary use of the waters for domestic and sanitary purposes (as well as deepening of channels, construction of breakwaters, harbor improvements, and other public works for commerce and navigation) subject to the condition that the rights of the other country are not impaired.

Article IV prohibits artificially raising the levels of boundary waters without the approval of the International Joint Commission. Article VII establishes the International Joint Commission. Article XI provides for resolving disputes, including appointment of an Umpire.

NAME: CONVENTION AND PROTOCOL (between His Britannic Majesty in respect to the Dominion of Canada, and the United States for regulating the level of the Lake of the Woods and of identical letters of reference submitting to the International Joint Commission certain questions as to the regulation of the levels of Rainy Lake and other upper waters).

EFFECTIVE DATE: February 24, 1925

TERM OF AGREEMENT: Perpetual

AUTHORITY/PARTIES: United States Department of State, Dominion of Canada

WATERSHED: Lake of the Woods, Rainy River and their tributary waters

ABSTRACT:

Article 2 recognizes domestic and sanitary uses of Lake of the Woods waters to be advantageous to both the United States and Canada. Article 11 prohibits further diversion of Lake of the Woods waters to any other watershed without the approval of the United States or Canada and the International Joint Commission.

#### INTERNATIONAL BOUNDARY WATERS

International Boundary waters are too numerous to list in this document. Further, a comprehensive list is not necessary. The following list includes the larger water bodies between Canada and Minnesota:

Basswood Lake	Little Vermillion Lake
Crooked Lake	Namakan Lake
Fowl Lake	North Lake
Gunflint Lake	Rainy Lake
Knife Lake	Sand Point Lake
Lac La Croix	Saganaga Lake
Lake of the Woods	Lake Superior
Pigeon River	Rainy River

In addition, two major rivers flow across the International Boundary:

Red River	Roseau River
-----------	--------------

The major tributary streams to the Rainy River and Lake of the Woods include:

Baudette River	Rapid River
Big Fork River	Silver River
Black River	Winter Road River
Little Fork River	

The remaining, and lesser streams and lakes may be identified by examination of the U.S. Geological Survey hydrologic unit map or topographic maps of the International Border. These lesser streams are contained in these hydrologic unit numbers:

04020300	09030005
04010101	09030006
09030001	09030007
09030002	09030009
09030003	090201XX
09030004	090203XX

In the last two entries, XX indicates all tributary streams in the watersheds.

#### COMMENTARY ON INTERNATIONAL AGREEMENTS

The International Agreements impose some limits on water supply planning. Any appropriation of waters from the water bodies discussed and listed earlier requires the review and approval of the IJC and Canadian interests. Approval for withdrawals from these water bodies could be somewhat more protracted because of the additional review required in Washington and in Canada. However, both countries and the IJC recognize that domestic water supply is a legitimate use of such waters and it is not the intention of the agreements to constrain the development of these resources for that purpose.

INDIAN WATER RESOURCES

## INDIAN WATER RESOURCES

### RIGHTS OF INDIANS

Indians are not subject to the Laws of Minnesota, but have independent authority over water on and under their reservations. Water rights are conveyed along with the land. The "Winters Doctrine" established the rights of Indians (28 S. Ct. 207, 1908). That provides that the Indians have a right to as much water as they can beneficially use. Water supply and irrigation are included in beneficial use.

In practice, the Bureau of Indian Affairs and Indian Health Service policies cooperate with State law by reporting Indian withdrawals to the Minnesota Department of Natural Resources.

The Bureau of Indian Affairs and Indian Health Service, acting as agents for the Secretaries of the Interior and Health and Human Services are authorized to contract with Indian Tribes to construct and operate water supply systems (25 USCA 13, 450f and 450g). In practice, the Bureau of Indian Affairs provides the funding and the Indian Health Service provides the technical support and engineering for design, construction and installation of water supply systems.

Court rulings have upheld the rights of Indians to waters on reservations. First, Indian Tribes enjoy independent authority to regulate waters with the Secretary of the Interior having concurrent jurisdiction to assure that water is divided in a just and equal manner among Indians on the reservation (Colville Confederated Tribes vs. Walton, 647 F. 2d p. 42). And again, where the United States has not specifically granted to a state any right in the waters of streams within an Indian Reservation, created by treaty before the state was admitted, it has the exclusive right to use such waters for the benefit of Indians of the reservation (U.S. vs. Parkins, Wyo 1926 18 F. 2d 642).

In Minnesota there are eleven reservations. Some of these are composed of multiple and non-contiguous units. These are:

1. Boys Fort (Nett Lake) - Koochiching and St. Louis Counties
2. Fond du Lac - Carlton and St. Louis Counties
3. Grand Portage - Cook County
4. Leech Lake - Cass and Itasca Counties
5. Lower Sioux - Redwood County
6. Mille Lacs - Mille Lacs County
7. Prairie Island - Goodhue County
8. Red Lake - Beltrami, Clearwater and Lake of the Woods Counties
9. Shakopee - Scott County
10. Upper Sioux - Renville County
11. White Earth - Becker, Clearwater and Mohnomen Counties



## DOMESTIC WATER SUPPLY ON RESERVATIONS

Domestic water supply systems that have been installed on Indian Reservations in Minnesota all appropriate ground water for their use. Figure 2 reproduces a U.S.G.S. map showing the crystalline rock aquifers of the Archean and Proterozoic ages.

These water supplies are:

### Boys Fort (Nett Lake, Vermillion units)

1. Boys Fort
2. Nett Lake
3. Palmquist
4. Vermillion

### Fond du Lac

1. Ridge Road
2. Belich Road

### Grand Portage

1. Grand Portage

### Leech Lake

1. Cass Lake tracts 33 and 34
2. Mission
3. Bena
4. Ball Club
5. Plantation
6. Inger
7. North Ball Club
8. Middle Ball Club
9. Westside Acres

### Lower Sioux

1. Lower Sioux

### Mille Lacs

1. Vineland
2. North Vineland
3. East Lake

### Prairie Island

1. Prairie Island

### Red Lake

1. Little Rock
2. Poneman
3. Red Lake
4. Redby

### Shakopee

1. Phase I
2. Phase II

### Upper Sioux

None

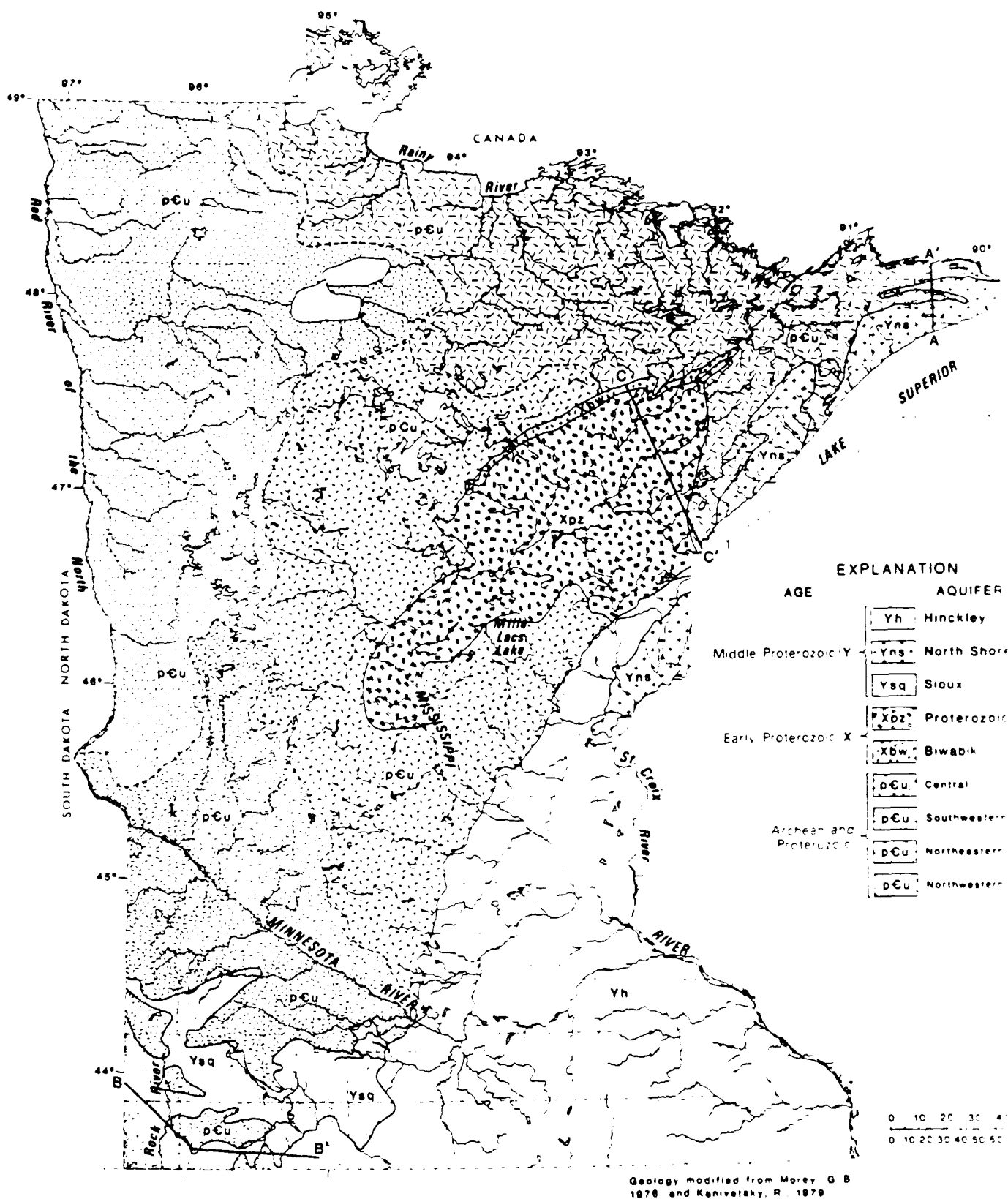


FIGURE 3. Crystalline Rock Aquifers of Archean and Proterozoic Age.

#### White Earth

1. Ranch
2. Old Rice Lake
3. New Rice Lake
4. Elbow Lake
5. White Earth
6. Naytahwaush
7. Pondsford
8. Unnamed - serves 4 homes

#### Ground Water Sources

The U. S. Geologic Survey provided some information on the aquifers that are used on four of the reservations. These have been studied by the agency at the reconnaissance level or preliminary data has been gathered. The information is of a general nature because the various reports are not yet available in published form.

At Fond du Lac Reservation there are three sources of ground water used for domestic consumption. These are unconfined glacial drift aquifers, confined glacial drift aquifers and bedrock aquifers. The latter two are the most important.

At Leech Lake evidence indicates that nearly all of the wells are in the confined glacial drift aquifers. Most of the rest are in the undifferentiated Proterozoic Crystalline rock.

Red Lake Reservation also relies on confined drift aquifers. Approximately two percent of the wells are in fractured bedrock.

Similarly, White Earth wells tap the confined and unconfined glacial drift aquifers. In addition, at White Earth the unconfined glacial drift aquifers include surficial outwash plains.

Information for some of the other reservations was provided by a representative of the Indian Health Service. At Grand Portage the old well is believed to be in the bedrock, especially since the drift is so thin in that location. Wells at the Boys Fort Reservation are commonly in undifferentiated Proterozoic crystalline rocks. Prairie Island and Shakopee are in the Hinkley sandstone aquifer. Lower Sioux Agency taps the undifferentiated Proterozoic crystalline rock.

#### Surface Water

As with the International Boundary Waters, the surface water bodies are too extensive on Reservations to inventory in this document. When a specific need arises, the U.S.G.S. hydrologic unit maps and topographic maps will provide detailed information. A partial list of the larger surface watercourses include:

Boys Fort - Nett and Vermillion Lakes; Nett Lake and Little Fork Rivers  
 Fond du Lac - Big and Perch Lakes; St. Louis River  
 Grand Portage - Lake Superior; Pigeon River  
 Leech Lake - Leech, Winnibigoshish, Cass, Point, Bowstring, Sand, Round,  
                     Ball Club, Cedar, Squaw and Woman Lakes; upper reaches of  
                     Leech Lake River  
 Lower Sioux - Minnesota River  
 Mille Lacs - Mille Lacs Lake  
 Prairie Island - Mississippi River  
 Red Lake - Upper and Lower Red Lake, Lake of the Woods; upper reaches of  
                     Red Lake and South Branch Rivers as well as the upper reaches of  
                     the Mississippi River.  
 Upper Sioux - Minnesota River  
 White Earth - Bass, Big Rat, Big Rush, Elbow, Many Point, Upper and Lower  
                     Rice, Strawberry, Tulaby, and White Earth Lakes; upper  
                     reaches of the Wild Rice, South Branch Wild Rice and Buffalo  
                     Rivers.

Of these lakes and along these reaches of rivers, the State of Minnesota does not have the authority to curtail the beneficial use of water by the Indians.

#### COMMENTARY ON INDIAN WATER RESOURCES

The key point to be emphasized in this review is the interests of the Indians must be taken into consideration and with their participation in the process.

Treaty rights, court rulings and Federal regulations provide for the protection of Indian water rights. These protections are institutionalized in the Bureau of Indian Affairs in the Department of the Interior and the Indian Health Service of the Department of Health and Human Services. During a water emergency, these agencies will have to be dealt with, along with the individual Tribal Government, in the same sense that the State of Minnesota must be dealt with concerning the waters of the State.

Simplifying the process is the fact that most reservations are not near large concentrations of population. The most notable exceptions are Shakopee at Prior Lake in Dakota County and Upper Sioux Agency near Granite Falls in Renville County. Further, the largest Indian Reservations are near the upper reaches of basins. Once the waters leave the Reservation, they are the waters of the State and are available for appropriation without consideration of Indians until such time as the waters re-enter a Reservation.

The Minnesota Department of Natural Resources (MDNR), Division of Waters, comments that the exact applicability of the Winters Doctrine to Minnesota water rights law has never been litigated in Minnesota. Thus, the description in this report of Indian water rights in Minnesota may be an oversimplification of these issues, particularly regarding the application of the Winters Doctrine to a reasonable use state. MDNR further cautions about the applicability of the Winters Doctrine to eastern water law.

MINNESOTA DEPARTMENT OF NATURAL RESOURCES

## DEPARTMENT OF NATURAL RESOURCES

### GENERAL

The fundamental authority of the Commissioner of the Department of Natural Resources is defined in Minnesota Statutes in general and then in specifics. These statutes have been implemented through the Rules and Regulations promulgated by the Department of Natural Resources. To begin, the Statutes establish the following general authority and responsibility with respect to water appropriation. These powers and responsibilities have direct impact on domestic water supplies.

1. Over use, allocation and control of waters of the state (105.39 Subd. 3).
2. Manage waters to assure long-range seasonal requirements are met, for domestic water supply and other permitted uses (105.405 subd. 1.)
3. A permit is required to withdraw surface water or groundwater except for domestic water supplies serving 25 persons or fewer (105.41 Subd. 1).
4. Control over Water Supply District, public and private, in times of water shortage (105.418).
5. Ability to restrict withdrawal of water from surface sources to protect higher priority users and natural resources (105.417 Subd. 2).
6. Establish and maintain the state water information system (105.39 Subd. 6).

### STATEWIDE PRIORITY

The priority for appropriation and use of water is established by Minnesota Statutes as follows (105.41 Subd. 1a):

1. Domestic water supply, excluding industrial and commercial uses.
2. Any use involving consumption of less than 10,000 gallons per day (Note: "Consumption" means withdrawal and loss, not just withdrawal).
3. Agricultural irrigation and processing of agricultural products over 10,000 gpd.
4. Power production in excess of 10,000 gpd.
5. Other uses in excess of 10,000 gpd.

Note that industrial and commercial uses over 10,000 gpd fall into category 5. Also, note that water for domestic purposes at industrial and commercial establishments falls into Priority 1; other waters used in conducting the business falls into Priority 5.

### MAINTENANCE NOTE TO READER:

As of September, 1987, the Minnesota Department of Natural Resources was reviewing the allocation system for the state. Staff members of the DNR reported that a different approach is being considered, but administrative action has not yet been completed. After that legislative action may be necessary.

## AUTHORITY OVER WATER SUPPLY DISTRICTS

The governor may issue an executive order that states a period of critical water deficiency exists, which then places responsibilities on individual water supply authorities and gives certain powers to the Commissioner of the DNR.

1. Adopt and enforce restrictions on water use within their jurisdiction, including: lawn sprinkling, car washing, golf course and park irrigation, and other non-essential uses (105.418).
2. The Commissioner may adopt emergency rules covering periods of critical water shortage, with the power to immediately modify a permit to withdraw water if the authority does not enforce the restrictions on water use (105.418).

These authorities and responsibilities have been further defined in the Rules of the Department of Natural Resources (6115.0690 Subpart 1). The permit application for a Public Water Supply must include:

1. The number of domestic users;
2. Reasonable projection of population growth;
3. Number and type of industrial and commercial users of the public water supply system;
4. The amount of water to be supplied to domestic, industrial, and commercial users respectively;
5. Other users by type of use and amount to be used from the public supply system such as golf courses, recreational lake level maintenance, water transferred to other supply systems;
6. Information regarding the quantity of the appropriated water to be used in distribution and waste water treatment facilities, not including volume of actual waste water; and
7. Details on emergency plans for water shortage periods outlining public information programs, priorities for limitations of discretionary water use, and alternative sources of public water supplies.

## LEGAL SAFEGUARDS TO MAINTAIN PUBLIC WATER SUPPLIES

The following lists the protections in Law and Regulation designed to protect Public Water Supplies. Most of these items apply to all uses, including commercial and industrial.

1. Most important, any permit issued by the Commissioner can be cancelled at any time for the protection of the public interests (105.44 Subd 9 (1)).
2. Allocation of water from surface streams must be limited to protect higher priority users during periods of low flow (105.417 Subd. 1).
3. Withdrawals from waterbasins (including lakes) is limited to one-half acre-foot per acre (105.417 Subd. 3 (a)).
4. Each permit application must contain a contingency plan which describes alternatives to be used if appropriation is restricted because of low flow to protect higher priority users (105.417 Subd. 5).
5. Appropriation will be denied if the appropriation is not reasonable, practical and does not adequately protect public safety and promote public welfare (105.45 and 6115.0670 Subpart 3 (A) (3)).

6. The Commissioner is required to establish and maintain a statewide water information system (105.39 Subd. 6).
7. For a pre-existing ground water well used for public water supply that is affected by a more recently permitted well, the Commissioner may restrict or cancel the appropriation (6115.0730, Subpart 2 (D)).
8. Existing and proposed users are required to employ the best available means and practices based on economic considerations for assuring wise use and development of the waters (6115.0770).

#### STATEWIDE WATER INFORMATION SYSTEM

Minnesota Statutes and the Rules and Regulations of the Department of Natural Resources are designed to reasonably control the allocation of waters in the state to protect higher priority users as well as the natural resources of the state. One important mechanism established by Statutes and implemented by Regulations is the Statewide Water Information System that is designed to account for uses and allocations of water from specific water bodies, both surface and underground.

1. The Commissioner is required to establish and maintain a statewide water information system (105.39 Subd. 6).
2. All parties withdrawing underground water, for any purpose, in any amount, must report its location, purpose of use, capacity and other information to the Commissioner (105.41 Subd 2).
3. For any permitted use, annual calendar year monthly records of the amount of water appropriated or used and the water level measurement shall be reported to the Commissioner by February 15 of the following year.

Note that the reporting requirement in Item 2 cover all of the users excluded from the permit system, including domestic supplies serving less than 25 persons and users of less than 10,000 gpd.

#### CONFLICT RESOLUTION PROCEDURES

Inherent in the Statutes and explicitly stated in the Rules and Regulations are certain powers for the Commissioner of the Department of Natural Resources to resolve conflicts and to protect higher priority users. The procedure outline in the Rules apply when competing demands among existing and proposed appropriations endanger public health, safety and welfare would be impaired. The Procedure is:

1. No right of use exists by obtaining a permit from the State.
2. The Commissioner will analyze and evaluate the following:
  - A. reasonableness for use of the water
  - B. water use practices to determine if proposed and existing users use water in the most efficient manner.
  - C. alternative sources of supply.
3. Conflicts will be resolved by modifying permits when possible.
4. Conflicts that cannot be resolved through modification of the permit, then issuance of new permits, retention, modification or termination of permits will be as follows:



- A. Users of the same priority will develop and submit a plan which provides for proportionate distribution of the limited water.
  - 1) New applications will not be considered.
  - 2) If existing appropriation endangers the supply of waters, the Commissioner can suspend or limit appropriation until a plan is approved by the Commissioner.
  - 3) The plan must include proposals for allocating the waters that consider the following:
    - a) reduction in the amounts of appropriation with proportionate allocation to all users of the same priority
    - b) restrictions in timing of withdrawals so each user could withdraw a proportionate amount over time
  - 4) The Commissioner can approve the plan and issue revised permits based on the plan.
  - 5) If the proposed plan is determined to be not practical by the Commissioner, he shall develop a new plan and allocate water accordingly.
- B. If the unresolved conflict involves users who are or would be in different priorities then available water is allocated as follows:
  - 1) Highest priority users shall be satisfied first.
  - 2) Remaining waters shall be allocated to the next succeeding priority until no water is available.
  - 3) Users in the same priority class shall be offered the options offered in Item A above.

NAME: MINNESOTA STATUTES, CHAPTER 105  
EFFECTIVE DATE: 1977  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: State of Minnesota/All water users  
WATERSHED: All State Waters

ABSTRACT:

This Chapter of the Statutes defines the power of the Commissioner of the Department of Natural Resources in general and then in specific. This Chapter is implemented through Rules and Regulations promulgated by the Department of Natural Resources. To begin, the Statutes establish the following general authority and responsibility with respect to water appropriation. These powers and responsibilities have direct impact on domestic water supplies.

1. Over use, allocation, and control of waters of the state (105.39 Subd. 3).
2. Manage waters to assure long-range seasonal requirements are met, for domestic water supply and other permitted uses (105.405 Subd. 1).
3. A permit is required to withdraw surface water or ground water except for domestic water supplies serving 25 persons or fewer (105.41 Subd. 1).
4. Control over Water Supply Districts, public and private, in time of water shortage (105.418)
5. Ability to restrict withdrawal of water from surface sources to protect higher priority users and natural resources (105.417 Subd. 2).
6. Establish and maintain the state water information system (105.39 Subd. 6).

The priority for appropriation and use of water is established by 105.41 Subd. 1(a) as follows:

1. Domestic water supply, excluding industrial and commercial uses
2. Any use involving consumption of less than 10,000 gallons per day.  
(Note: "Consumption" means withdrawal and loss, not just withdrawal.)
3. Agricultural irrigation and processing of agricultural products over 10,000 gpd.
4. Power production in excess of 10,000 gpd.
5. Other uses in excess of 10,000 gpd.

Note that water for domestic purposes at industrial and commercial establishments falls into priority 1; other water used in conducting the business falls into priority 5.

The Commissioner of the DNR is given power to restrict permitted water withdrawal during a period of critical water deficiency as declared by the Governor (105.418). These powers include provision of immediate modification of permits of lower priority users and ability to impose water conservation measures on water supply districts.

Further, any permit issued by the Commissioner can be canceled at any time for the protection of public interests (105.44 Subd. 9). Allocation of water from surface streams must be limited to protect higher priority users during periods of low flow (105.417 Subd. 1). One other important protection is that each

permit application must contain a contingency plan which describes alternatives to be used to protect higher priority users (105.417 Subd. 5).

The Commissioner is required to maintain a statewide information system (105.39 Subd. 6).

Conditions or Limitations:

This Chapter applies to all Waters of the State except for domestic water appropriations serving less than 25 persons. The United States portion of International Boundary Waters are Waters of the State. Waters on and under Indian Reservations are not Waters of the State until they leave the reservation.

NAME: CHAPTER 6115 PUBLIC WATER RESOURCES  
EFFECTIVE DATE: 1977  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: State of Minnesota/All water users  
WATERSHED: All State Waters

ABSTRACT:

These are the rules promulgated by the Department of Natural Resources that implement Chapter 105 of Minnesota Statutes. The rules establish the permit system for appropriation of water. Section 6115.0030 provides definitions for terms used in these rules and regulations. Application fees are covered in 6115.0060 to 6115.0110. The policy of the state is to provide for the orderly and consistent review of permit applications for appropriation and use of waters of the state in order to conserve and utilize the water resources of the state in the public interest. Any appropriation must be consistent with laws and rules of Federal, State and local governments.

Information that must be included in a permit application for a public water supply must include:

1. The number of domestic users;
2. Reasonable projection of population growth;
3. Number and type of industrial and commercial users of the public water supply system;
4. The amount of water to be supplied to domestic, industrial and commercial users respectively;
5. Other users by type of use and amount to be used from the public supply systems such as golf courses, recreational lake level maintenance, water transferred to other supply systems;
6. Information regarding the quantity of the appropriated water to be used in distribution and waste water treatment facilities, not including the volume of actual waste water; and
7. Details on emergency plans for water shortage periods outlining public information programs priorities for limitations of discretionary water use, and alternative sources of public water supplies.

## CONSTRAINTS ON STATE AUTHORITY

### INTERNATIONAL TREATIES

Treaties between the United States and Canada place some restrictions on the use of international waters. The international waters are of two types:

1. Boundary waters such as the Pigeon and Rainy Rivers; lakes such as Superior, Lake of the Woods, Rainy and Namakan.
2. Waters that are tributary to Lake of the Woods and the Rainy River.

The Treaty establishes the International Joint Commission, and is the underlying basis for agreement between the two countries. It establishes the IJC as having authority over use, obstruction or diversion of boundary waters and waters flowing into and out of each country to the other. Of particular interest is that it establishes the precedence for the use of water as:

1. domestic and sanitary purposes;
2. navigation, including service of navigation canals;
3. uses for power and irrigation.

When injury is done the other party, each country has access to the legal remedies of the other country. Existing uses are grandfathered (1909), with some restrictions.

Future (after 1909) uses, obstructions and diversions of boundary waters, whether temporary or permanent, must have the approval of both governments and the IJC. This is not intended to limit or interfere with ordinary use of the waters for domestic and sanitary purposes, subject to the condition that the rights of the other country are not impaired.

### IMPLICATIONS FOR STATE ALLOCATION

International waters and waters flowing into Canada are waters of the State of Minnesota, subject to only these conditions:

1. Canadian rights cannot be impaired.
2. Diversion and obstruction of the flow is permitted only with the approval of the United States, Canada and the IJC.

It is important to be aware that the definitions of International Waters as contained in the 1910 Treaty specifically excludes tributary waters which flow into boundary waters, except as later modified by agreement. These are are tributary streams to Lake of the Woods and the Rainy River. Even there, use for water supply is an accepted use. During an emergency, the Canadian interest is likely to be affected only to the extent that the elevation of flow may be affected by the withdrawal.

The concerns of Canada are protected by the existing permitting process for water withdrawal, which assures that the International interests are informed and have the opportunity to comment on the proposed action.

#### COMMENTARY ON CONSTRAINTS ON STATE AUTHORITY

During a water emergency, the authority of the Federal Government and the State of Minnesota is constrained by treaties, conventions and protocols with Canada and by the rights of Indians, also granted by treaties.

In the case of Canadian rights, only the cities of International Falls, South International Falls and Rainy Lake are affected at the present time. Watercourses affected are limited in geographic scope to those that form the International Boundary and several American tributaries of Lake of the Woods and the Rainy River.

More constraints are imposed by the rights reserved to Indians. First, the watercourses and lakes located wholly or partially within reservations, as well as the reaches of rivers flowing in and through reservations are reserved for beneficial use by Indians. Secondly, ground water contained in the aquifers beneath the treaty lands also belong to the Indians, insofar as it can be beneficially used.

Fortunately, these constraints impose few difficulties from a strategic planning perspective. First, the International and Indian waters are limited in geographic scope. Further, the water bodies affected tend to be the upper reaches of rivers, in the case of Indian Reservations, or are located in water plentiful portions of the state. But these rights must be honored during a water emergency. The permitting process of the State of Minnesota facilitates protection of the Canadian and Indian Treaty rights.

WATERSHED DISTRICTS, WATER USER DISTRICTS, AND  
WATER SUPPLY DISTRICT LEGISLATION

NAME: CHAPTER 112 MINNESOTA WATERSHED ACT  
EFFECTIVE DATE: 1967  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: Watershed Board/Water User  
WATERSHED: All Waters of the State

ABSTRACT:

The purpose of the Minnesota Watershed Act is to form a public corporation, as an agency of the State, for the conservation of land and water resources of the State (112.34 Subd. 1). A watershed district may be established for any of the following conservation purposes:

1. Flood control
2. Channel improvement
3. Reclaiming or filling overflow lands
4. Providing water supply for irrigation
5. Regulating flow and conserving water
6. Diverting flow
7. Providing and conserving water supply for domestic, industrial, recreational, agricultural or other purposes
8. Sanitation and disposal of wastes
9. Improve, modify or construct drainage systems
10. Control of soil erosion and siltation
11. Regulation of improvements by riparian landowners
12. Electric power
13. Protect and enhance water quality
14. Protect groundwater and regulate its use

Item 7 directly applies to domestic water supply. The fact that a Watershed District could build a water supply system provides one mechanism for such systems to serve population living in two counties.

The managers of a watershed district may acquire, operate, construct and maintain a water supply system, as well as dams, dikes and reservoirs. Further, the district may acquire property outside of the district for water supply purposes. It has the power of eminent domain (112.43 Subd. 1(4) and 1(6)). The authority of the watershed district is restricted in the seven county metropolitan area and inside of statutory or home rule cities. In these cases, the watershed district is required to coordinate with the city.

All permits and contracts for the use of waters within a watershed district must have the approval of the watershed district board (112.71). This creates a second, largely duplicate, permitting authority that is similar to the Department of Natural Resources under Chapter 105.



NAME: CHAPTER 358 OF THE 1987 REGULAR SESSION  
EFFECTIVE DATE: 1987  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: Minnesota Water Resources Board/Soil and Water Conservation  
Board/Department of Agriculture  
WATERSHED: Entire State

ABSTRACT:

Chapter 358 of the 1987 Regular Session is a law with many purposes. Of interest to water planners is that as of October 1, 1987 the watershed districts, soil and water conservation districts and Southern Minnesota River basin districts will be combined into one system housed under the Minnesota Department of Agriculture.

Section 101 merges the Water Resources Board with the Board of Water and Soil Resources. The section also continues the same authorities that the Water Resources Board had previously. Section 103 establishes the membership of the reconstituted board and certain other administrative procedures.

NAME: CHAPTER 110A RURAL WATER USER DISTRICTS  
EFFECTIVE DATE: 1978  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: State of Minnesota/Water User District  
WATERSHED: All Waters of the State

ABSTRACT:

A water user district is empowered to own land, property, rights, rights-of-way, and easements necessary to conserve, control and distribute water. The water may be used for domestic, commercial, industrial and stock watering purposes, but not for irrigation. No such district may be formed within the seven county metropolitan area. A board, elected by the members, manages the district.

The district has the usual powers of a public corporation (110A.28 Subd. 1). It may own, purchase, construct or otherwise acquire any works associated with the acquisition, treatment, and distribution of water (110A.28 Subd. 2). It may enter into contracts (110.28 Subd. 3). It has the power of eminent domain (110A.28 Subd. 6), but it does not have the power to tax or to levy assessments. Its revenues are to be from Federal grants or income from the sale of water. Further, it cannot provide water to non-agricultural lands within one-half mile of the limits or a city of less than 20,000 population without the city's consent. For cities over 20,000 population the limit is one mile.

NAME: CHAPTER 116A PUBLIC WATER AND SEWER SYSTEMS  
EFFECTIVE DATE: 1971  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: Department of Health/Individual Counties, District Courts  
WATERSHED: All Waters of the State

ABSTRACT:

This statute empowers county boards and district courts that are outside of the seven county metropolitan area to form public water and sewer systems (116A.01 Subd. 1). The county board or district court may acquire, construct, finance, operate and maintain the system the same as any statutory city (116.01 Subd. 1a and 2). As with Rural Water User Districts, when the proposed water supply system includes parts of more than one county, the district court provides the mechanism to establish the district instead of the county board.

NAME: CHAPTER 452 MUNICIPAL OWNERSHIP  
EFFECTIVE DATE: 1976  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: Department of Health/Individual Cities  
WATERSHED: All Waters of the State

ABSTRACT:

This Chapter of Minnesota Statutes, while addressing municipal ownership in general, empowers cities of the first class to own or acquire their own water supply system (452.08).

While this statute applies only to cities of the first class (Minneapolis, St. Paul, Duluth) any other city in the state that operates under the Home Rule provisions of Minnesota law has these same powers. Therefore, the statute applies to nearly all cities in the state.

## FORMATION OF WATER SUPPLY DISTRICTS IN MINNESOTA

Minnesota Statutes provide for the formation of public water supply districts under Chapters 116A, 112 or 110A. Each of these chapters provide for slightly different circumstances, although information available in September, 1987 indicates that only Chapter 116A districts have been formed.

Chapter 116A is used by statutory cities to establish their water districts. Rural areas lying within one county and outside of the seven county metropolitan area may use the Chapter to form a water supply district by action of the county board. Inside the seven county metropolitan area, counties are not permitted to form water supply districts; only cities and townships have that power. Chapter 116A may also be used to form a water district that includes portions of two or more counties by a petition to the district court. This chapter has been used seven times to form a rural water supply district. These instances are listed on the next page.

Watershed districts, formed under Chapter 112, may also establish a water supply district, as long as that is a stated purpose of the district. Since the watershed district may include both incorporated and unincorporated areas, the district can cross city limits when the statutory conditions are met. These conditions relate to the approval of the City Councils for each municipality involved. Watershed districts may include lands in one or more counties. Therefore, the water supply district may also cross county boundaries. The watershed board is the responsible party that must establish the water supply district.

Chapter 110A provides for the formation of a water user district that may include statutory cities, if the City Council approves, as well as portions of one or more counties. The district is managed by an elected board. The district is established by order of the district court, after receiving a petition from citizens. A water user district may not be formed in the seven county metropolitan area.

In summary, there are several ways in which water supply districts may be organized in Minnesota, even though only one of the Chapters has been used to date. In the seven county metropolitan area, water supply districts cannot be formed by the county board or a water user district. In rural areas outside of the seven county metropolitan area, rural water supply districts may be formed by the county, by the district court or by a rural water user district.

## RURAL WATER USER DISTRICTS

As has already been explained, there are three separate Chapters of Minnesota Statutes that allow for the formation of public water supply districts in cities and unincorporated portions of counties (110A, 112 and 116A). To date, it appears that only Chapter 116A water supply districts exist in Minnesota. Typically, cities own and operate their own water supply systems. The following is a list of rural water supply districts that have been formed to date (September, 1987). All of these were formed under Chapter 116A. Districts encompassing more than one county are the ones formed by a district court.

1. Green Lake Sanitary Sewer and Water District  
The governing body of this water district is the Board of County Commissioners of Kandiyohi County.  
Willmar, Minnesota  
(612) 235-0992
2. Kittson Marshall Rural Water System  
Established by Order of the District court, Ninth Judicial District, on August 2, 1972.  
Donaldson, Minnesota 56720  
(218) 478-2450
3. Marshall and Polk Rural Water System  
Established by Order of the District court, Ninth Judicial District, on July 26, 1973.  
Warren, Minnesota 56762  
(218) 773-0540
4. North Kittson Rural Water System  
Established by the Kittson County Board of Commissioners, April 4, 1977.  
Hallowell, Minnesota 56728  
(218) 754-6161
5. Lincoln-Pipestone Rural Water System  
Established by Order of the District Court, Fifth Judicial District, June, 1979.  
Tyler, Minnesota 56178  
(605) 692-5200
6. Rock County Rural Water District  
Established by the Rock County Board of Commissioners in January, 1980.  
Luverne, Minnesota 56156  
(507) 283-8886
7. Red Rock Rural Water System  
Established by Order of the District Court, Fifth Judicial District, in December, 1984.  
Jeffers, Minnesota 56145  
(507) 628-4201

MINNESOTA DEPARTMENT OF HEALTH

NAME: CHAPTER 144 STATE COMMISSIONER OF HEALTH  
EFFECTIVE DATE: 1977  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: Department of Health/Water Supply Districts  
WATERSHEDS: All Waters of the State

ABSTRACT:

Chapter 144 provides the statutory basis for operation of the Department of Health. Generally, the chapter provides the statutory basis for approving, inspecting, testing and examining records, including those of water supply districts.

Specifically, the Commissioner is empowered to adopt rules for distribution of water for domestic drinking use (144.12 Subd. 1(5)).



NAME: CHAPTER 144.381 to 144.387 SAFE DRINKING WATER ACT OF 1977  
EFFECTIVE DATE: 1977  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: Department of Health/Water Supply District  
WATERSHEDS: All Waters of the State

ABSTRACT:

This concise act empowers the Commissioner of Health with:

1. Approve the site, design, and construction and alteration of public water supply.
2. Enter the premises to inspect facilities and records, standards of operation and service delivered by public water supplies.
3. Contract with local departments of Health to conduct surveys, inspections and testings.
4. Develop an emergency plan to protect the public when a decline in water quality or quantity creates a serious public health risk, and to issue emergency orders if a health risk is imminent.
5. Promulgate rules no less stringent than Federal regulations which provides for variances and exemptions.

Item 4 is a requirement that applies to each water supply district. Its purpose is to assure the best available treatment when water quality falls below existing standards. The later section on compliance in the next act details the contents and actions that must be taken. The same applies to periods of water shortage. Each water supply district is required by law to have a plan which shows how they will implement water conservation measures, inform the public, obtain public cooperation, and solve the water shortage problem.

NAME: CHAPTER 4720.0100 PUBLIC WATER SUPPLIES  
EFFECTIVE DATE: 1977  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: Department of Health/Water Supply District  
WATERSHEDS: All Waters of the State

ABSTRACT:

For this section, "Public Water Supply" is defined as a system providing piped water for human consumption, and either containing a minimum of 15 service living units, or serving at least 25 persons daily for 60 days of the year.

Other definitions are contained in 4720.0100.

Section 4720.0040 provides that no municipality shall enter into a contract or agreement (including renewals) without the approval of the Commissioner of the Department of Health.

Variances to the water quality standards for water supplies are contained in 4720.2600. Such variances permit use of water that exceeds or will exceed a maximum contaminant level. The procedure for applying for a variance is contained in 4720.2700. The requirements include the nature and duration of the variance, analytical results of relevant tests, explanation of best available treatment, a date for alternative raw water source, a date for initiation of the connection, a date for initiation of the connection, a date for final compliance, a plan for provision of safe drinking water in the case of an excessive rise in the contaminant level, a plan for interim control measures, a statement of compliance with requirements imposed by the Commissioner, and other information that may be required.

The Commissioner may grant exemptions from a maximum contamination level. The procedures are:

1. Construction, installation, or modification of treatment equipment or systems; the time needed to put into operation a new treatment facility to replace the existing supply which is not in compliance; economic feasibility of compliance, and
2. Due to compelling factors (which may include economic factors) the supply is unable to comply with such contaminant level or required treatment; the supply was in operation on the date on which such contaminant level or required treatment went into effect; and the granting of the exemption will not result in an unreasonable risk to health.

The procedures for application for an exemption is contained in 4720.3200. The application must be in writing and contain the following information:

1. The nature and duration of the exemption.
2. Relevant analytical results.
3. Explanation of the compelling factors such as time or economic factors which prevent compliance.
4. Proposed compliance schedule.
5. Other information required by the Commissioner.
6. Other information which the applicant believes is pertinent.

The Commissioner must initiate action within 90 days of the application.

Water hauler requirements are contained in 4720.400. These rules are designed to assure sanitary procedures by those who distribute drinking water by tank truck. These include the health of the individual operator, as well as the tank requirements and cleaning and disinfection.

NAME: CHAPTER 4725 WATER WELL CONSTRUCTION CODE  
EFFECTIVE DATE: 1977  
TERM OF AGREEMENT: Perpetual  
AUTHORITY/PARTIES: Department of Health/Well Drillers  
WATERSHEDS: All Waters of the State

ABSTRACT:

Definitions are contained in 4725.0100. This section of the Department of Health's rules establish the code for drilling wells for water supply.

Specifically, public water supply wells are addressed in 4725.0300. Complete plans and specifications for the installation, alteration, or extension must be submitted in duplicate to the Department of Health before any work is initiated. Further, such information as the Commissioner may require must also be submitted. Deviations from the approved plans are not allowed.

Requests for modifications need to be submitted in writing to the Commissioner.

PROCEDURES FOR WATER SUPPLY EMERGENCIES

DEPARTMENT OF HEALTH AND  
POLLUTION CONTROL AGENCY

**PROCEDURES FOR WATER SUPPLY EMERGENCIES  
CONTAMINATION FROM SUPERFUND SITES**

The following memorandum documents an agreement between the Pollution Control Agency and the Department of Health for water emergencies caused by contamination from Superfund sites. These are locations where contamination has taken place from disposal of hazardous materials in landfills. When these sites contaminate a public water supply, the memorandum establishes the emergency procedures that will be followed.

The procedures provide for use of tankers as the means of providing water to the affected public in the short term. After the water supply is provided, longer-term water supply alternatives are examined.

DEPARTMENT

POLLUTION CONTROL AGENCY

## Office Memorandum

TO: Richard Clark  
Minnesota Department of Health and  
David Lundberg  
Minnesota Department of Emergency Services

DATE March 11, 1985

FROM: Michael P. Convery  
Minnesota Pollution Control Agency *MPC*

PHONE 297-1459

SUBJECT: PROCEDURES FOR WATER SUPPLY EMERGENCIES

Since our meeting of February 21, 1985, I've updated the procedures for dealing with water supply emergencies, incorporating the changes and comments discussed in the meeting. These updated procedures are included in the attached diagram. This diagram is basically a flowchart outlining the steps to be followed, the activities that are being conducted, the staff and governmental bodies to be notified, and a rough estimate of time frames.

A few items in the flowchart should be highlighted. The Department of Health (MDH) notifies selected local officials and the Minnesota Pollution Control Agency (MPCA) upon receiving initial sampling results showing a potential problem. This will enable the MPCA to gather some background information and allow local officials to give some thought to the problem. Upon receiving the confirmation sampling results showing a problem, the Department of Emergency Services (DES) will be notified by MPCA to put the National Guard on stand-by (or prepare for any other course of action). Once the Health Advisory is formulated and water supply alternatives are coordinated with local officials, MPCA will notify DES and the process to formally mobilize the National Guard (or any other course of action) will be implemented. Therefore, DES is notified twice - the first time to prepare trucks on a stand-by basis and the second time to formally mobilize the National Guard. Waiting to notify DES until the confirmation results are available will eliminate the possibility of the National Guard responding to "false alarms."

Please review the flowchart and return any comments, corrections, or suggestions to me and I will make the modifications. I do appreciate your efforts on this matter. These procedures will hopefully keep us all better informed as we deal with any future water supply emergencies and result in a less hectic course of action.

MPC:sg

cc: Elizabeth Gelbman, MPCA, Public Information Office  
Gary Pulford, Chief, Site Response Section  
Michael Kanner, Unit Supervisor, Responsible Party Unit  
Bruce Brott, Senior Engineer, Superfund Unit

Attachment

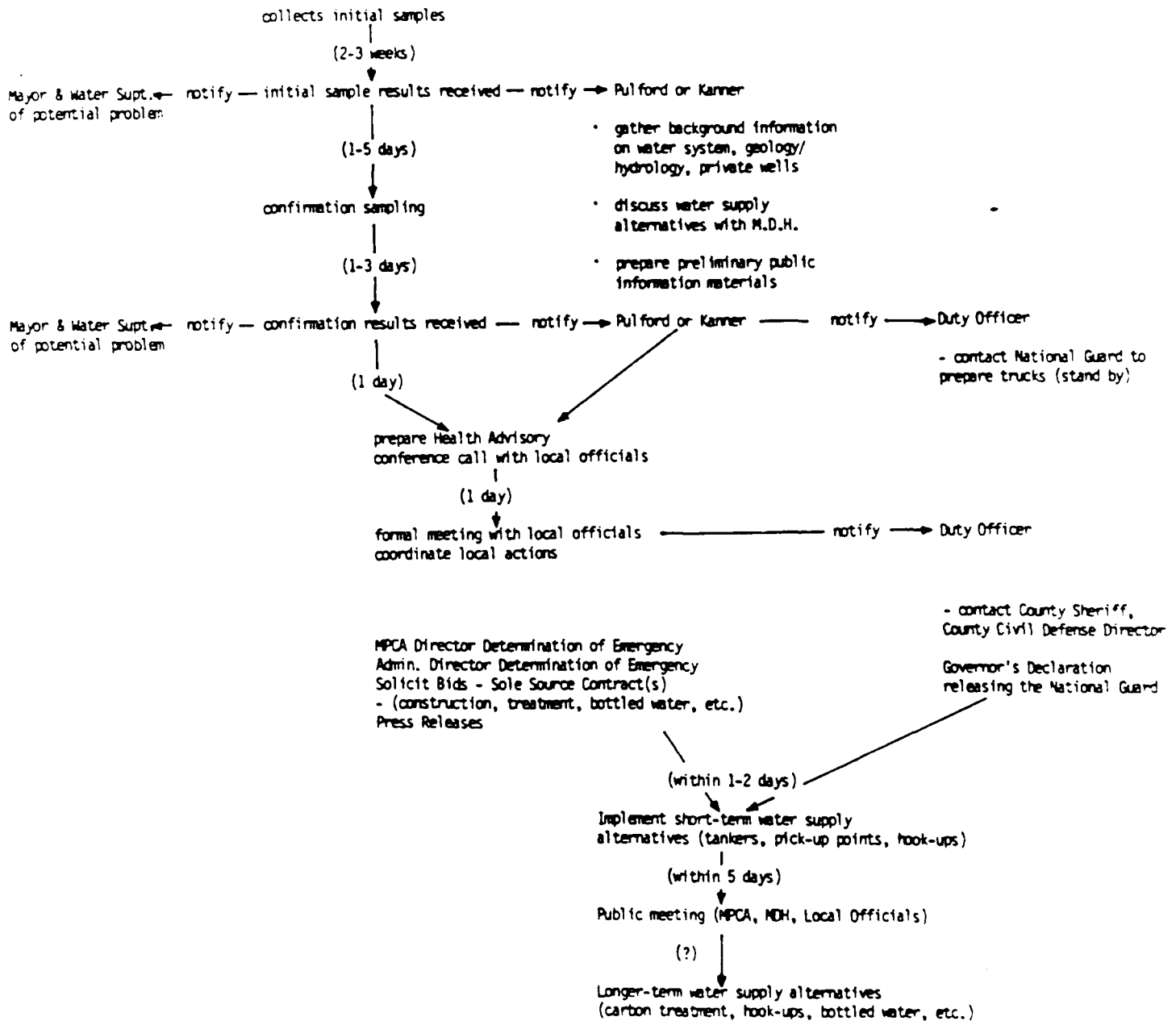
# Water Supply Emergency Procedures

Local Community

M.D.H.

M.P.C.A.

D.E.S.



M.D.H. - Minnesota Department of Health (Gary Englund 623-5330, Richard Clark 623-5227)

M.P.C.A. - Minnesota Pollution Control Agency (Michael Kanner 296-7397, Gary Pulford 296-7290 or designated Project Leader)

D.E.S. - Department of Emergency Services (Duty Officer 778-0800)

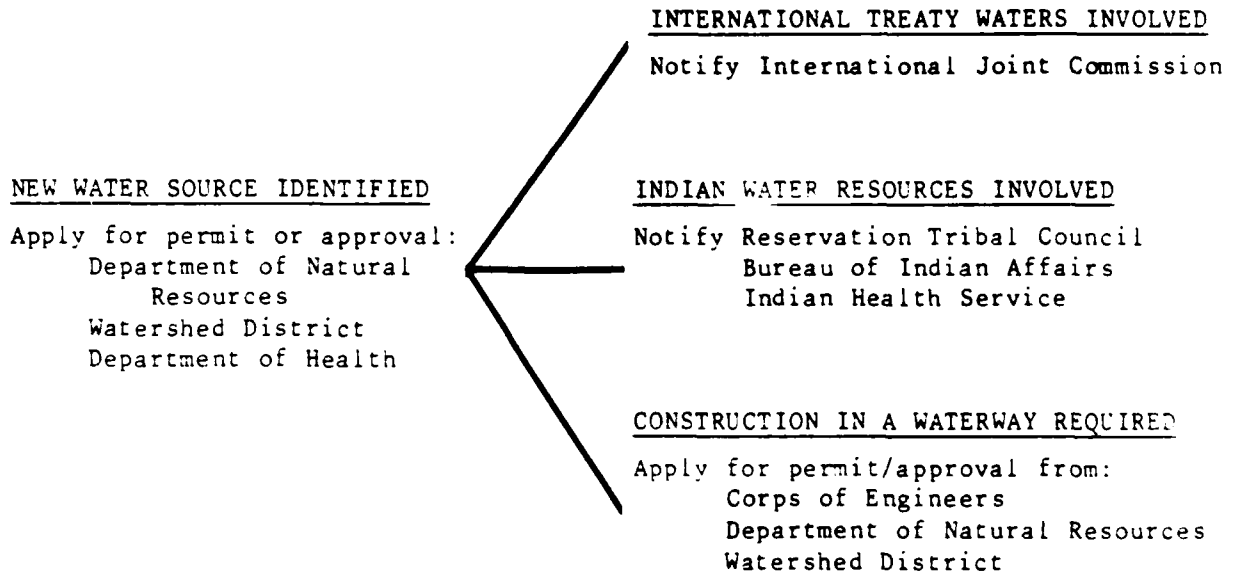


**SUMMARY OF AGENCY INVOLVEMENT**

**NEW WATER SUPPLY**

**SUMMARY OF AGENCY INVOLVEMENT  
NEW WATER SUPPLY**

During a period of water shortage, if a new water supply is sought the Statutes require involvement with a variety of Federal and State agencies depending upon the source of the water. That interrelationship is illustrated below.



Once the need for a new water source is established that requires a new appropriation, there is a potential for involvement of the:

- International Joint Commission
- Indian Reservation Tribal Council
- Bureau of Indian Affairs
- Indian Health Service
- Department of Natural Resources
- Watershed District
- Department of Health
- Corps of Engineers

Any new appropriation requires a permit from the Minnesota Department of Natural Resources, an approval from the local Watershed District should it exist, and the approval of the raw and finished water quality from the Department of Health. To accomplish this, the appropriator needs to contact the agencies as follows:

Department of Natural Resources  
Division of Waters  
St. Paul, Minnesota  
(612) 296-4800

Department of Health  
Minneapolis, Minnesota  
(800) 652-9747

Watershed District  
Check local directory

For the readers convenience, a list of Watershed Districts that existed in 1986 are provided at the end of this section on pages I-48 and I-49.

Actually, the permit to appropriate water is filled with the appropriate regional office of the Department of Natural Resources. Depending upon the county that the new water source is located, the application is filed in:

Bemidji  
Grand Rapids  
Brainerd  
New Ulm  
Rochester  
St. Paul

These offices will have the appropriate permit forms.

Other agencies become involved if any of several special conditions are present.

First, if International Boundary Waters or some of the tributary streams that are listed on page I-11, then the International Joint Commission in Washington, D.C. should be contacted. The Commission will determine if Canadian rights are involved and if the Canadian Government needs to approve the withdrawal through their established procedures.

International Joint Commission  
202-673-6222

Then, if the water source is on or near an Indian Reservation, then care must be taken to honor the rights of the Indians. This is accomplished by obtaining their participation in any decision to appropriate water that affects their resources. The Tribal Council, the Bureau of Indian Affairs and the Indian Health Service need to be involved. These are located as follows:

Tribal Council  
Check local directory

Bureau of Indian Affairs  
Minneapolis, Minnesota  
(612) 349-3631

Indian Health Service  
Bemidji, Minnesota  
(218) 751-7701

It is important to honor the rights of the Indians and to obtain their participation in the appropriation approval process. Failure to do so could unnecessarily delay implementation of a emergency water plan.

The last agencies that could be involved are the Corps of Engineers, the Department of Natural Resources and the Watershed District (Soil and Water Conservation District). These agencies are required to review plans for any significant construction in a waterway such as would likely be required for an intake structure. A permit to construct in a waterway is required by both the Corps of Engineers and the DNR. The Watershed District typically issues a letter of approval instead of a formal permit. Contact these agencies as follows:

Corps of Engineers  
Permits Section  
St. Paul, Minnesota  
(612) 725-5819

Department of Natural Resources  
Division of Waters  
St. Paul, Minnesota  
(612) 296-4800

Watershed District  
Check local directory

The Statutes, rules and regulations of the several agencies involved create an approval process that involves parallel lines of authority. Application with one agency normally does not satisfy the regulatory requirements of the others. Care must be taken to meet the requirements of the several agencies by moving in more than one direction at the same time.

#### WAIVER POWER AND TIMING OF APPROVALS

A concern that could possibly be important in a future water crisis is the time that it would take to obtain the requisite approvals for a new water system. In the case of the DNR, the Commissioner has a great deal of authority in times of water crisis. Statutes provide for waiver of some application requirement if the Commissioner determines that it is in the public interest. But for other agencies the Statutes provide little guidance. How fast the other agencies can respond to the needs of the water shortage is in question.

#### FINAL CAUTION

During the preparation of this document, a spokesman for the Minnesota Department of Health provided comments on the statutory requirement for an emergency plan to be prepared by each water supply district to cover a time when either the quality or quantity of water falls below the established standards. The Department of Health, the informant stated, does not keep a copy of these emergency plans on file in their office. Further, it was stated that in all probability the larger cities or water supply districts would have

such a plan on file in their offices. But, it is likely that the smaller towns, such as in the rural parts of Minnesota, do not have such a plan on file. Therefore, during a water emergency, do not assume that every Statutory requirement has been fully implemented by each agency or public corporation.

# LIST OF WATERSHEDS IN MINNESOTA AS OF NOVEMBER, 1986

The following watershed districts are listed alphabetically by county.

<u>District Name</u>	<u>Place of Business</u>	<u>County</u>
Coon Creek Watershed District	Andover	Anoka
Cormorant Lakes Watershed District	Lake Park	Becker
Pelican River Watershed District	Detroit Lakes	Becker
Upper Minnesota River Watershed District	Ortonville	Big Stone
Buffalo-Red River Watershed District	Barnesville	Clay
Thirty Lakes Watershed District	Brainerd	Crow Wing
Lower Minnesota River Watershed District	Burnsville	Dakota
Turtle Creek Watershed District	Hollandale	Freeborn
Bear Valley Watershed District	Bellchester	Goodhue
Belle Creek Watershed District	Belle Creek	Goodhue
Minnehaha Creek Watershed District	Wayzata	Hennepin
Nine Mile Creek Watershed District	Edina	Hennepin
Riley-Purgatory-Bluff Creek Watershed District	Eden Prairie	Hennepin
Crooked Creek Watershed District	Caledonia	Houston
Middle Des Moines Watershed District	Heron Lake	Jackson
Joe River Watershed District	Humbolt	Kittson
The Two Rivers Watershed District	Hallock	Kittson
Lac Qui Parle-Yellow Bank Watershed District	Madison	Lac Qui Parle
Yellow Medicine River Watershed District	Minneota	Lyon
Middle River-Snake River Watershed District	Warren	Marshall
Buffalo Creek Watershed District	Glencoe	McLeod
Okabena-Ocheda Watershed District	Worthington	Nobles
Kanaranzi-Little Rock Watershed District	Adrian	Nobles
Wild Rice Watershed District	Ada	Norman
Red Lake Watershed District	Thief River Falls	Pennington
Sand Hill River Watershed District	Fertile	Polk
Ramsey-Washington Metro Watershed District	St. Paul	Ramsey
Rice Creek Watershed District	Arden Hills	Ramsey
Roseau River Watershed District	Roseau	Roseau
Warroad Watershed District	Warroad	Roseau
Prior Lake-Spring Lake Watershed District	Prior Lake	Scott
High Island Watershed District	Arlington	Sibley
North Fork Crow River Watershed District	Paynesville	Stearns
Sauk River Watershed District	Freeport	Stearns

<u>District Name</u>	<u>Place of Business</u>	<u>County</u>
Cooks Valley Watershed District	Kellogg	Wabasha
Carnelian-Marine Watershed District	Stillwater	Washington
Valley Branch Watershed District	Oakdale	Washington
Stockton-Rollingstone-Minnesota City Watershed District	Minnesota City	Winona
Clearwater River Watershed District	Annandale	Wright

REFERENCES REVIEWED

## REFERENCES REVIEWED

- Colville Confederated Tribes vs. Walton, 647 F. 2d p. 42  
Secretary of the Interior has concurrent jurisdiction over water resource allocation on Indian Reservations with the Tribal Council.
- Great Lakes Governors Task Force, 1985. Water Diversion and Great Lakes Institutions.  
Examines use of Great Lakes waters from three perspectives: the need for regional action, protecting the Great Lakes, and institutional capabilities in the Great Lakes Region.
- International Joint Commission, 1910. Treaty.  
Establishes the International Joint Commission, its authority, and the agreement governing the use, obstruction and diversion of international boundary waters.
- International Joint Commission, 1912. Rules of Procedure of the International Joint Commission.  
Contains the rules of procedure for the International Joint Commission, including the method for submitting an application to the Commission.
- International Joint Commission, 1925. Convention and Protocol.  
Agreement between the United States and Canada on the regulation of the level of Lake of the Woods and for certain questions as to the regulation of Rainy Lake and other waters.
- International Joint Commission, 1940. By the President of the United States of America, A Proclamation. October 18.  
A Presidential Proclamation granting the International Joint Commission the power to regulate the level of the Rainy River at Kettle Falls and International Falls and at other locations in the Rainy Lake watershed.
- International Joint Commission, 1940. Report on the Souris River Investigation.  
Presents recommendations for appropriation, regulating flow and regulating use of waters that cross the border.
- International Joint Commission, 1946. Order Prescribing Method of Regulation of the Levels of Boundary Waters. With Supplemental Orders.  
Agreement between the United States and Canada on the regulation of the level of Rainy Lake and other border water bodies, as well as tributary streams to those boundary waters.
- International Joint Commission, 1949. Order Prescribing Method of Regulating the Levels of Boundary Waters. June 8. With Supplementary Orders 1 October 1957 and 29 July 1970.  
Establishes the study of the most advantageous use of Rainy Lake waters and its tributaries, as well as the best way to regulate the level of its waters.



- International Joint Commission, 1958. Report of the IJC to the Governments of the United States and Canada on the Souris River, with Special Reference to the Interim Measures Recommended in its Report of 2 October, 1940.  
Formalized the findings of the 1940 study.
- International Joint Commission, 1965. Report of the IJC Canada and United States on the Pollution of the Rainy River and Lake of the Woods.  
February.  
Presents the results of a sampling program to determine the level of pollution in the Rainy River and Lake of the Woods.
- International Joint Commission, 1967. Cooperative Development of the Pembina River Basin. October.  
Examines the benefits to each country of development of the Pembina River Basin. The United States portion of the basin lies in North Dakota.
- International Joint Commission, 1968. Report of the IJC Canada and United States on the Pollution of the Red River. April.  
Examines the causes and location of pollution of the Red River and examines the extent of the threat to human health on both sides of the border.
- International Joint Commission, 1976. Further Regulation of the Great Lakes.  
Examines the benefits and detriments of regulating the levels of the Great Lakes beyond present efforts.
- International Joint Commission, 1978. Great Lakes Water Quality Agreement of 1978.  
Contains the text of the agreement between the two countries governing water quality in the Great Lakes.
- International Joint Commission, 1985. Great Lake Diversions and Consumptive Uses. January.  
A review of the diversions from the Great Lakes and their tributary waters, as well as the consumptive uses by government and industry.
- International Joint Commission, 1985. IJC Activities Report 1985.  
Annual report of the International Joint Commission.
- Minnesota, State of, 1986. Minnesota Rules and Regulations, Chapters 4720, 4725, and 6115.  
Contains the rules and regulations of the Departments of Health and Natural Resources as they pertain to emergency water planning, water allocation and water use.
- Minnesota, State of, 1986. Minnesota Statutes. Chapters 105, 110A, 112, 116A, 144, 452.  
Contains the annotated Chapters of Minnesota Statutes through 1986.

Minnesota, State of, 1987. 1987 Regular Session. Chapter 358.

Contains Sections 101 through 105 which merges the Watershed Districts with the Soil and Water Conservation District and merging the Water Resources Board into the Soil and Water Conservation Board. These are to be housed in the Department of Agriculture as of October 1, 1987.

Minnesota Water Planning Board, 1978. Rural Water Supply Systems. Technical Paper No. 4.

The paper reviews the status of legislation, planning, design and financing rural water systems as of 1978. It makes recommendations on the establishment of rural water systems to insure their appropriateness to specific areas of the state.

Minnesota Water Planning Board, 1979. Toward Efficient Allocation and Management: A Strategy to Preserve and Protect Water and Related Land Resources.

Examines use of water as of 1979 and the needs for the future. Makes recommendations over a broad range of issues facing the state.

Minnesota Water Resources Board, 1986. Roster of Watershed Districts and Other Special Purpose Governmental Organizations Concerned with Water Resources Management in Minnesota.

Contains useful maps, lists, addresses and telephone numbers of water resource agencies in Minnesota.

U. S. Code Annotated. 25 USCA 13, 450f and 450

Contains the authority to construct and operate water supply systems on Indian Reservations. Implemented by the Bureau of Indian Affairs through the Secretary of the Interior and the Indian Health Service through the Secretary of Health and Human Services.

U.S. Geological Survey, 1986. Hydrogeologic and Water Quality Characteristics of Crystalline-Rock Aquifers of Archean and Proterozoic Age.

The map presented in Figure 2 was taken from this source.

It presents a general map of crystalline rock aquifers for the entire state.

U.S. vs. Parkins, Wyo 1926 18 F. 2d 642

Indian Tribes have exclusive right to reservation waters as long as the state was not specifically granted rights to the water by Congress when it was admitted to the Union.

U. S. Supreme Court. 28 S. Ct. 207, 1908

Contains the "Winter's Doctrine. Indians possess the right to as much water as they can beneficially use. States cannot control that beneficial use of water.

Water Resources Research Center, 1986. Minnesota Water: A Geographical Perspective.

Examines water resources in Minnesota in three major areas: water availability, water use and water resource problems. Problems include river water quality, atmospheric deposition, groundwater problems, lake eutrophication and flooding.

**INDEX**

## ALPHABETICAL INDEX TO VOLUME I

### A

Abstract - I-9, I-10, I-23, I-25, I-29, I-30, I-31, I-32, I-33, I-37, I-38, I-39, I-41  
Administrative rules and regulations - I-2  
Advisory Board on Pollution of Rainy River and Lake of the Woods - I-7  
Agreements, See International, Federal, regional, State, tribal and local  
Agricultural irrigation - I-19, I-22  
Allocation from specific water bodies, I-21  
Allocation limited, I-20, I-23  
Alternative sources of water supplies - See Water supplies, alternative sources  
Application - See Permit application  
Approval  
    of plan - See Water supply system, plan  
    of system - See Water supply system, approval  
Appropriation - I-3, I-4, I-17, I-19, I-23, I-25  
    consistent with Federal, State and local laws and rules - I-25  
    constraints - I-3  
    denied, I-20  
    ground water - I-14  
    endanger public health, safety and welfare, I-21  
    permit - I-2, I-48  
    report requirements - I-21  
    rights - I-4  
    suspension - I-23  
    use, allocation and control of waters of the state - I-23  
    water - I-3  
    wise use and development of waters - I-21  
    withdrawals from waterbasins limited - I-20  
Aquifers - I-16, I-29  
Archean age - I-14

### B

Ball Club Lake - I-17  
Bass Lake - I-17  
Basswood Lake - I-11  
Baudette River - I-11  
Becker County - I-13  
Bedrock aquifers - I-16  
Beltrami County - I-13  
Bemidji, Minnesota - I-48  
Beneficial use of water by the Indians - See Indians, beneficial use  
Best available treatment - See Water supply system, Best available treatment  
Big Fork River - I-11  
Big Lake - I-17  
Big Rat Lake - I-17  
Big Rush Lake - I-17

Black River - I-11  
Bowstring Lake - I-17  
Boundary waters - I-26  
    existing uses - I-26  
Boys Fort Reservation - I-13, I-16, I-17  
Brainerd, I-48  
Buffalo River - I-17  
Bureau of Indian Affairs - I-1, I-13, I-17, I-47, I-48

C

Canada - I-3, I-7, I-9, I-10, I-26, I-27  
    border - I-4  
    government - I-3, I-48  
    interests - I-26  
    rights - I-26, I-27, I-48  
Carlton County - I-13  
Cass County - I-13  
Cass Lake - I-17  
Cedar Lake - I-17  
Chapter 105 - I-23, I-25, I-29  
Chapter 110A - I-31, I-34, I-35  
Chapter 112 - I-29, I-34, I-35  
Chapter 144.381 to 144.387 - I-34  
Chapter 116A - I-32, I-34, I-35  
Chapter 144 - I-34  
Chapter 358, 1987 Regular Session - I-30  
Chapter 452 - I-33  
Chapter 4725 - I-41  
Chapter 4720.0100 - I-39  
Chapter 6115 Public Water Resources - I-25  
City  
    councils - I-34  
    home rule - I-33  
    of the first class - I-33  
Clearwater County - I-13  
Colville Confederated Tribes vs. Walton, 647 F. 2d 42 - I-13  
Commentary - I-11, I-17, I-27  
Commercial and industrial uses and users - See Industrial and commercial  
Commissioner - I-2  
    of Health - I-37, I-39  
    powers - I-38  
    empowered to adopt rules, I-37  
    initiate action within 90 days - I-40  
    of Natural Resources - I-2, I-19, I-20, I-21, I-22, I-23, I-24  
    for powers, rules and regulations - See Natural Resources, Department of  
Compensating works - I-7  
Conditions or limitations - I-24  
Confined glacial drift aquifers - I-16  
Conflict resolution - I-21  
Conflicts - I-21

Conserve water - I-2  
Conservation  
  of land and water resources - I-29  
  measures - I-2  
Constraints, I-26  
  on water appropriation - I-3  
Construct in a waterway - See Permit to construct in a waterway  
Consumption of less than 10,000 gallons per day - I-23  
Contamination from Superfund sites - I-43  
Contingency plan, I-5, I-20, I-24  
Control over Water Supply Districts - I-23  
Convention and protocol of 1925 - I-10  
  Article 2 - I-10  
  Article 11- I-10  
Cook County - I-13  
Corps of Engineers - I-1, I-4, I-5, I-47, I-49  
  permits Section - I-49  
County - I-2, I-32  
  board - I-32  
  powers same as any statutory city - I-32  
Court ruling - I-1, I-2, I-13, I-17  
Critical water deficiency - I-2, I-3, I-4, I-20, I-23, I-25, I-38, I-43, I-47  
  ability to respond - I-48  
  non-essential uses - I-4, I-20  
  procedures, Superfund sites - I-43  
Crooked Lake - I-11  
Crystalline rock aquifers - I-13

D

Dakota County - I-17  
Dams - I-29  
Data Collection - I-1  
Department of Agriculture - I-30  
Department of Health - See Health, department of  
Department of Health and Human Services - See Health and human services  
Department of Natural Resources - See Natural resources, department of  
Department of the Interior - See Interior, Department of the  
Dikes - I-29  
Discretionary water use - I-25  
Distribution of water - I-31  
District court - I-31, I-34  
  powers same as any statutory city - I-31  
Diversion and obstruction - I-26  
Division of waters - See Natural Resources, department of, waters  
DNR - See Natural Resources, department of  
Domestic consumption - I-16  
Domestic users - I-20  
Domestic water supply - I-2, I-4, I-5, I-11, I-19, I-23, I-29  
  systems - I-14  
Dominion of Canada - See Canada  
Donaldson - I-35

## E

- Elbow Lake - I-17
- Economic considerations - I-21
- Emergency
  - orders - I-38
  - plans for water shortage periods - I-20, I-25
  - powers - I-2
  - procedures - I-43
  - rules - I-20
- Emergency water
  - plan - I-48
    - to protect the public - I-38
    - lack of availability, I-49
  - planner - I-3, I-4
  - planning - I-1
- Eminent domain - I-29, I-31
- Endangers the supply of waters - I-22
- Executive order - I-20
- Exemption
  - application procedures - I-39
- Existing uses - I-9, I-26

## F

- Federal
  - agreements - I-1
  - government - I-27
  - regulations - I-17
  - waters - I-4
- Finished water quality - I-2, I-4, I-5
- Fond du lac reservation - I-16, I-17
- Formation of water supply districts - See Water supply districts, formation
- Fort francis - I-8
- Fowl lake - I-11
- Functional classification of water resources - I-3

## G

- Grand portage reservation - I-16, I-17
- Grand rapids - I-48
- Granite falls - I-17
- Goodhue county - I-13
- Governor - I-2, I-20, I-23
- Great lakes
  - basin ecosystem - I-7
  - flows - I-7
  - levels - I-7
  - Water quality agreement of 1978 - I-7
  - water supplies - I-7

Green lake sanitary sewer and water district - I-35  
Ground water sources - I-16  
Gunflint Lake - I-11

## H

Hallock, Minnesota - I-35  
Health, Department of - I-1, I-2, I-4, I-5, I-32, I-37, I-38, I-41, I-47, I-48, I-49  
    agreement with pollution control agency - I-43  
    approval of the Commissioner - I-39  
    definitions - I-39  
    other definitions - I-39  
    statutory basis - I-37  
Health and Human Services - I-17  
    secretary - I-13  
Higher priority users - I-19, I-21  
Highest priority satisfied first - I-22  
Hinkley sandstone aquifer - I-16  
Home rule cities - See City, home rule  
Hydrologic unit map - I-11  
Hydrologic unit numbers - I-11

## I

IJC - see International Joint Commission  
Immediate modification of permits - I-23  
Impose water conservation measures - I-23  
Incorporated and unincorporated areas - I-34  
Indian Health Service - I-1, I-13, I-16, I-17, I-47, I-48  
Indians - I-3, I-13, I-27  
    beneficial use - I-27  
    consideration of water rights - I-17  
    independent authority - I-13  
    just and equal distribution - I-13  
    participation in allocation - I-17  
    reservations - See Reservations for complete list - I-2, I-3, I-4, I-13, I-14, I-24, I-48  
treaties - I-3  
tribes - I-3, I-13  
water resources - I-3, I-13, I-17, I-27, I-47  
    beneficial use - I-13  
    delay caused by failure to involve tribal council - I-48  
    exclusive right to use waters - I-13  
    independent authority to regulate waters - I-13  
    rights - I-13, I-27, I-48  
    rights conveyed - I-13  
U.S. vs. Parkins, Wyo 1926 18 F. 2d 642 - I-13  
25 USCA 13, 450f and 450g - I-13  
withdrawals - I-13



Indian water systems

- Ball club - I-14
- Belich road - I-14
- Bena - I-14
- Boys fort - I-14
- Cass lake tracts 33 and 34 - I-14
- East lake - I-14
- Elbow lake - I-16
- Grand portage - I-14
- Inger - I-14
- Little rock - I-14
- Lower sioux - I-14
- Middle ball club - I-14
- Mission - I-14
- Naytahwaush - I-16
- Nett lake - I-14
- New rice lake - I-16
- North ball club - I-14
- North vineland - I-14
- Old rice lake - I-16
- Palmquist - I-14
- Phase I - I-14
- Phase II - I-14
- Plantation - I-14
- Poneman - I-14
- Prairie island - I-14
- Pondsford - I-16
- Ranch - I-16
- Red lake - I-14
- Redby - I-14
- Ridge road - I-14
- Vermillion - I-14
- Vineland - I-14
- Westside acres - I-14
- White earth - I-16

Information requirements, I-25

Industrial and commercial

- users, I-25
- uses - I-19, I-20

Interior, Department of the - I-17

- secretary - I-13
- secretary having concurrent jurisdiction - I-13

International

- agreements - I-11
- boundary - I-11, I-27
- boundary waters - I-2, I-3, I-9 - I-11, I-16, I-24, I-26, I-27, I-47, I-48
- treaties - See International joint commission, treaty
- treaty waters - See International boundary waters

International Falls - I-8, I-27

International Falls-Fort Francis Dam - I-8

International Great Lakes Advisory Board

International Great Lakes Levels Board

International Great Lakes Water Quality Board

- International Joint Commission - I-1, I-7, I-9, I-10, I-11, I-26, I-47, I-48
  - appointment of an umpire - I-9
  - authority over use, obstruction or diversion of boundary waters, I-26
  - boards
    - advisory board on pollution of rainy river and lake of the woods - I-8
    - great lakes advisory board - I-7
    - great lakes levels board - I-7
    - great lakes water quality board - I-7
    - lake of the woods board of control - I-8
    - lake superior board of control - I-7
    - rainy lake board of control - I-8
    - red river water pollution board - I-8
    - souris-red rivers engineering board - I-8
  - existing uses grandfathered - I-9
  - legal remedies - I-9
  - resolving disputes - I-9
  - organizational structure - I-7
  - treaty, I-26
    - article II - I-9
    - article III - I-9
    - article IV - I-9
    - article VII - I-9
    - article VIII - I-9
    - article XI - I-9
- International Lake of the Woods Board of Control - See IJC boards
- International Lake Superior Board of Control - See IJC boards
- International Rainy Lake Board of Control - See IJC boards
- International Red River Water Pollution Board - See IJC boards
- International Souris-Red Rivers Engineering Board - See IJC boards
- International waters
  - appropriation - I-11
  - approval for withdrawals - I-11
  - approval of both governments and the IJC - I-9
  - development of resources - I-11
  - diversion - I-9
  - domestic and sanitary purposes - I-9
  - flowing into and out of each country - I-9
  - future uses - I-9
  - legitimate use - I-11
  - levels of boundary waters - I-9
  - obstruction - I-9
  - precedence for use - I-9
    - domestic and sanitary purposes - I-9
    - navigation - I-9
    - power - I-9
    - irrigation - I-9
  - rights of the other country not impaired - I-9
  - use - I-9
- Introduction - I-1
- Irrigation - I-13
- Issue emergency orders
- Issue revised permits - I-22
- Itasca County - I-13

## K

Kandiyohi County - I-35  
 Kettle Falls Dam - I-8  
 Key informants - I-1  
 Kittson-Marshall Rural Water System - I-35  
 Knife Lake - I-11  
 Koochiching County - I-13

## L

Lac la croix - I-11  
 Lake of the woods - I-3, I-8, I-9, I-10, I-11, I-17, I-26, I-27  
     approval of the United States, Canada, IJC - I-10  
     diversion of waters - I-10  
     domestic and sanitary uses - I-10  
     regulating level - I-10  
 Lake superior - I-3 - I-7, I-9 - I-11, I-17, I-26  
 Lake winnibigoshish, I-17  
 Lake of the woods county - I-13  
 Laws of Minnesota - I-13  
 Leech lake, I-17  
 Leech lake reservation, I-17  
 Leech lake river, I-17  
 Legal and regulatory framework - I-4  
 Legal remedies - I-26  
 Legal safeguards - I-20  
 Legislation - I-1, I-2, I-3, I-4  
 Limit appropriation - I-22  
 Lincoln-pipestone rural water system - I-35  
 Little fork river - I-11, I-17  
 Little vermilion lake - I-11  
 Local agreements - I-1  
 Local soil and water resources board - I-4  
 Long-range seasonal requirements - I-19, I-23  
 Lower red lake, I-17  
 Lower rice lake, I-17  
 Lower sioux reservation, I-17  
 Luverne, Minnesota - I-35

## M

Mahnomen County - I-13  
 Many point lake - I-17  
 Marshall and polk rural water system - I-35  
 Mille lacs county - I-13  
 Mille lacs lake - I-17  
 Mille lacs reservation - I-17  
 Minnesota River - I-17

Minnesota, State of - I-1, I-2, I-3, I-4, I-11, I-13, I-14, I-17, I-27  
attorney general's office - I-1  
department of health - See Health, Department of  
department of natural resources - See Natural resources, department of  
state planning agency - I-1  
statutes - I-2, I-19, I-21, I-23, I-25, I-33, I-34, I-35  
water resources board - I-1, I-30  
watershed act - I-26  
Minnesota-Wisconsin boundary area commission - I-1  
Mississippi River - I-17  
Modify a permit - I-21  
    immediate - I-20  
Municipal ownership - I-33

## N

Namakan lake - I-8, I-11, I-26  
Natural resources, department of - I-1, I-2, I-4, I-5, I-13, I-21, I-23, I-25,  
    I-29, I-43, I-48, I-49  
    division of waters - I-48, I-49  
    regional offices - I-48  
    rules - I-20  
Nett lake - I-17  
Nett lake river - I-17  
Nett lake unit - I-13, I-14  
New applications not considered - I-22  
New water source needed - I-47  
New water supply - I-4, I-47  
New ulm - I-48  
Non-essential uses - I-4, I-20  
North kittson rural water system - I-35  
North lake - I-11

## O

Ordinary use of waters, I-26  
Other uses - I-19, I-23  
Overview - I-3

## P

Parallel lines of authority - I-4, I-49  
Perch Lake - I-17  
Periods of water emergency - I-2  
Periods of water shortage - I-2  
Personal interviews - I-1

- Permit - See also Appropriation - I-5, I-47
  - application - I-20, I-39
    - contents
    - fees - I-25
    - must be in writing - I-39
  - appropriation - I-19
  - cancelled - I-20, I-23
  - construct in a waterway - I-4, I-5, I-47
    - permit - I-49
    - water supply, I-4
  - forms - I-48
  - no right of use exists - I-21
  - process - I-2, I-4, I-5
  - required - I-23
  - system - I-25
  - to withdraw - See Permit, appropriation
- Pigeon River - I-9, I-11, I-17, I-26
- Point Lake - I-17
- Pollution - I-8
- Pollution Control Agency - agreement with Department of Health - I-43
- Population growth - I-20
- Potential water supply - I-4
- Power canals - I-7
- Power production - I-19, I-23
- Prairie Island Reservation - I-17
- Point Lake - I-17
- Prior Lake - I-17
- Priority
  - for appropriation - I-19, I-23
  - for limitations of discretionary water use - I-20
  - for appropriation and use of water - I-19
  - system - I-2
  - highest priority satisfied first - I-22
  - higher priority users - I-19, I-21
- Processing of agricultural products - I-19, I-23
- Projection of population growth - I-25
- Proportionate allocation to all users of the same priority - I-22
- Proportionate distribution of the limited water - I-22
- Proposed plan not practical - I-22
- Protection of indian water rights - I-17
- Protection of public interests - I-23
- Proterozoic age - I-14
- Public information program - I-20, I-25
- Public interest - I-2, I-49
- Public water supply - See Water supply
  - districts - See Water supply districts
- Purpose - I-1

# R

Rainy lake - I-8, I-11, I-26, I-27  
     regulation of level and other upper waters - I-10  
 Rainy river - I-3, I-8, I-9, I-10, I-11, I-26, I-27  
     tributary waters - I-10  
 Rapid river - I-11  
 Raw water quality - I-2, I-4, I-5  
 Red lake reservation - I-17  
 Red lake river - I-17  
 Red river - I-8, I-9, I-11  
     watershed - I-8  
 Red rock rural water system - I-35  
 Redwood county - I-13  
 Regional agreements - I-1  
 Regulatory process - I-2  
 Renville county - I-13, I-17  
 Report organization - I-1  
 Requests for modifications - I-41  
 Reservation domestic water supply - I-14  
 Reservations - I-16, I-27  
     Boys fort - I-13, I-14  
     Fond du lac - I-13, I-14  
     Grand portage - I-13, I-14  
     Leech lake - I-13, I-14, I-16  
     Lower sioux - I-13, I-14, I-16  
     Mille lacs - I-13, I-14  
     Prairie island - I-13, I-14, I-16  
     Red lake - I-13, I-14, I-16  
     Shakopee - I-13, I-14  
     Upper sioux - I-13, I-14  
     White earth - I-13, I-16  
 Reservoirs - I-26  
 Restrict  
     appropriation - I-20, I-23  
     permitted water withdrawal, I-22, I-23  
     timing of withdrawals - I-22  
     to protect higher priority users - I-19  
     water use - I-20  
     withdrawal - I-23  
 Review of allocation system - I-19  
 Right to appropriate waters, I-4  
 Right to construct in a waterway, I-4  
 Rights of Indians - See Indians, water resources, rights  
 Rochester - I-48  
 Rock County Rural Water District - I-35  
 Roseau River - I-11  
 Round Lake - I-17  
 Rules and regulations - I-1, I-3, I-4, I-19, I-21, I-23, I-25  
 Rural areas - I-34  
 Rural water user district - See Water user district

## S

Safe drinking water act of 1977 - I-38  
 Saganaga lake - I-11  
 St. Louis county - I-13  
 St. Louis river - I-17  
 St. Paul - I-48  
 St. Marys river - I-7  
 Scope - I-1  
 Scott county - I-13  
 Sand point lake - I-11  
 Sand lake - I-17  
 Sea-level datum - I-8  
 Secondary sources - I-1  
 Section 101 - I-30  
 Section 103 - I-30  
 Shakopee reservation - I-16  
 Silver river - I-11  
 Soil and water conservation board - I-30  
 Soil and water conservation district - I-2, I-4, I-5, I-30, I-49  
 Souris river - I-8  
 South branch river - I-17  
 South branch wild rice river - I-17  
 South International Falls - I-27  
 Southern minnesota river basin district - I-30  
 Squaw lake - I-17  
 State agreements - I-1  
 State of Minnesota - See Minnesota, State of  
 Statewide water information system - I-19, I-20, I-23, I-24  
 Statute - I-2  
 Strawberry lake - I-17  
 Summary of agency involvement  
 Summary of findings - I-1  
 Superfund sites - I-47  
 Surface water - I-16  
 Surficial outwash plain - I-16

## T

Tank truck - I-39  
 Telephone interviews - I-1  
 Timing of approvals - I-49  
 Topographic map - I-11  
 Treaty - I-2  
     between the United States and Great Britain relating to Boundary Waters  
     of 1910 - I-8, I-9  
     rights - I-3, I-17  
 Tribal  
     agreements - I-1  
     council - I-17, I-47, I-48  
     government - I-17  
 Tributary waters - I-26  
 Tulaby Lake - I-17  
 Tyler, Minnesota - I-35

## U

Unconfined glacial drift aquifer - I-16  
 Undifferentiated proterozoic crystalline rock - I-16  
 Unencumbered waters - I-3  
 United States - I-7, I-9, I-10, I-13, I-24, I-26  
     department of state - I-9, I-10  
     government - I-3  
     supreme court - I-3  
 U.S. Army Corps of Engineers - See Corps of Engineers  
 U.S. Geological Survey - I-1, I-14 - I-16  
     hydrologic unit map - I-11 - I-16  
     hydrologic unit number - I-11  
     topographic map - I-11 - I-16  
 Unresolved conflict - I-22  
 Upper red Lake - I-17  
 Upper rice Lake - I-17  
 Upper sioux reservation - I-17  
 Use, allocation, and control of waters of the state - I-19

## V

Variance  
     and water quality standards - I-39  
     requirements - I-39  
 Vermillion lake - I-17  
 Vermillion unit - I-14  
 Volume I - I-1

## W

Waiver - I-49  
 Waiver power - I-2, I-49  
 Warren, Minnesota - I-35  
 Washington, D.C. - I-48  
 Waste water treatment facilities - I-20, I-25  
 Water allocation - I-1, I-3  
     system - I-2  
 Water and sewer systems - I-32  
     seven county metropolitan area - I-32  
     outside of seven county metropolitan area - I-34  
     power to contract - I-31  
     powers of a public corporation - I-31  
 Water appropriation annual report - I-5  
 Water appropriation - See Appropriation  
 Water conservation - I-2  
 Water crisis - See critical water deficiency  
 Water emergency - See also Critical water shortage - I-17, I-26  
 Water hauler requirements - I-40  
 Water level measurement - I-21



- Water quality board - I-7
- Water requirements, I-8, I-19
- Water resources functional classification - I-2, I-3
- Water shortage period - See Critical water deficiency
- Water source - I-2, I-4
- Water supply - I-13, I-14, I-20, I-25, I-29, I-39, I-43
  - alternative sources - I-20, I-21, I-25
  - authorities - I-20
  - commercial - I-19, I-20, I-31
  - defined - I-39
  - deviations from approved plans not allowed - I-41
  - domestic - I-19, I-31
  - industrial - I-19, I-20, I-31
  - irrigation - I-31
  - planning - I-11
  - potential, I-4
  - request for modifications - I-41
  - stock watering - I-31
- Water supply districts - I-2, I-23, I-34, I-35, I-37, I-38, I-39, I-49
  - formation - I-34
  - in times of water shortage - I-19
  - non-essential uses - I-4, I-20
  - outside seven county area - I-34
  - two or more counties - I-34
- Water supply emergency - See Critical water deficiency
- Water supply systems - I-4, I-13, I-20, I-33
  - approval
  - best available treatment - I-21, I-38
  - construction - I-13
  - design - I-13
  - installation - I-13
  - operation - I-3, I-4, I-5
  - plan - I-4
- Water supply wells - I-41
  - installation - I-13
  - construction - I-13
  - design - I-13
- Water User District - I-31, I-32, I-34, I-35
  - cities - I-33
  - service restricted near cities - I-31
  - not in seven county metropolitan area - I-31
- Waters on reservations - See Indian water resources
- Waters of the state - I-2, I-3, I-4, I-17, I-24
- Watersheds - I-11
- Watershed district - I-2, I-4, I-29, I-30, I-34, I-47, I-48, I-49
  - acquire property outside of district - I-29
  - approval of the district board - I-29
  - authority restricted - I-29
  - list of - I-51, I-51
  - permits for use of waters - I-29
  - purpose - I-29
  - required to coordinate with city - I-29

Well construction code - I-41  
Well drillers - I-41  
Wells - I-16  
White earth lake - I-17  
White earth reservation, I-13, I-16, I-17  
Willmar - I-35  
Wild rice river, I-17  
Winter road river - I-11  
Winter's doctrine - I-13  
Woman Lake - I-17

APPENDIX A  
SCOPE OF WORK

Minnesota Water Allocation Law  
Scope of Work

1.00 INTRODUCTION

- 1.01 Project Description. The St. Paul District, Corps of Engineers, is currently conducting a multifaceted inventory of water supply information for the State of Minnesota. This inventory is intended to serve as a decision-making tool for emergency management operations during catastrophic or national security emergencies. One facet of this inventory concerns water agreements. Under certain emergency conditions, the maintenance and allocation of adequate water supplies and services may be critical to avoid loss of life. Informed decisions regarding water supplies require knowledge and understanding of existing water agreements. For purposes of this contract, water agreements include water control laws, permitting systems, international water treaties, treaties with Indian nations, and other legally binding documents which regulate the availability, flow, distribution, and storage of water.
- 1.02 Contract Purpose. Currently, no single reference is available that provides information pertaining to binding water agreements in Minnesota. The primary objective of this contract is to help fill this information void by providing a comprehensive inventory of water agreements for the State of Minnesota. The information collected will identify existing international, Federal, regional, State, tribal and local jurisdictional agreements that affect water availability and distribution in Minnesota and all of its political subdivisions. The information will be presented in a format that is useful for emergency decision-making situations.
- 1.03 Authority. The current basis for the Federal Emergency Resource Management Program is Executive Order 11490. This order assigns responsibility for emergency planning for our Nation's water supply to the U.S. Army Corps of Engineers. The St. Paul District of the Corps of Engineers has been directed to inventory water supply information for the State of Minnesota under guidance issued by the Office of the Chief of Engineers, dated December 1985.
- 1.04 Products. There are three products. The first is a compendium of Minnesota water agreements. This volume will include specific summary data for each water agreement identified by the contractor. The second volume will include photocopies of all water agreements referenced in the first volume. The third product is the contractor's written diary documenting research activities.

2.00 REPORT REQUIREMENTS

- 2.01 First Volume Structure. The compendium will consist of a table of contents, an introduction, tabulations of information, a bibliography, an index, and appendices.

2.02 Table of Contents. The table of contents will present all major sections and subsections of the report in outline format with appropriate page numbers.

2.03 Introduction. The introduction will be concise and include a description of the following: (1) the purpose of the document; (2) the study area and agencies involved; (3) the type of data collected and limitations of its use; (4) assumptions unique to this particular research endeavor; (5) general research methodology used; and (6) a summary of findings.

2.04 Tabulations of Information. The contractor will develop a method for identifying only those water agreements that directly apply to water allocation in the study area. The criteria for inclusion or exclusion of specific water agreements will be evaluated at the first checkpoint meeting. Specific items to be tabulated include:

1. Date of agreement.
2. Stated life of agreement.
3. Parties involved and bound by the agreement.
4. Watershed or water body affected.
5. A short abstract of the agreement.
6. A brief description of the conditions under which the agreement is effective and those conditions when the agreement is not effective, e.g., conditions and situations when waivers may be granted.

Tabulations for the above items will be categorized by level of government: international, Federal, regional, State, county, watershed board, local, or other obvious or natural classification system. Within this context, it is essential to identify agreements which are overlapping or potentially conflicting and those that affect either the same waterbody or control the same issue.

The contractor will present a sample format for data display at the first checkpoint meeting.

2.05 Bibliography. The bibliography will cite all referenced materials and works used in executing this contract for the purpose of documenting compliance with accepted practices in contemporary organizational and legal research. Further, each cited item will include a brief annotation describing the pertinent information contained in that citation.

2.06 Index. The index will list all of the parties and waterbodies involved in any of the water agreements that are included in the tabulation. Each party or waterbody in the index list will be followed by the page numbers or other reference numbers that will lead the reader to all water agreement summaries tabulated for that party or waterbody. Note that some of the indexed parties will be described in general for certain water agreements. For example, all

persons or legal bodies of the State of Minnesota that withdraw more than 10,000 gallons of water per year.

- 2.07 Appendices. The appendices will contain (1) this scope of work and (2) any other supplemental materials that the contractor believes necessary to the purpose of this investigation, as defined here.
- 2.08 Second Volume Structure. The second volume will consist of a table of contents, an introduction, photocopies of pertinent water agreements, an index, and appendix.
- 2.09 Table of Contents. The table of contents will present all major sections and subsections of the report in outline format with appropriate page numbers.
- 2.10 Introduction. The introduction will be concise and include, but not be limited to, a description of each of the following: (1) the purpose of the document; (2) the study area and agencies involved; (3) type of data collected and limitations to its use; (4) assumptions unique to this particular inventory; (5) general research methodology used; and (6) a summary of findings.
- 2.11 Photocopies of Water Agreements. All water agreements that are summarized in the first volume of this inventory will be photocopied in their entirety and included in the second volume of this inventory. The water agreements will be organized by level of government: international, regional, State, county, watershed board, local or other obvious distinguishment.
- 2.12 Index. The index will list all of the parties and waterbodies involved in any of the water agreements that are included in the second volume of this inventory. Each party or waterbody in the index list will be followed by the page numbers or other reference numbers that will lead the reader to the exact sections of all water agreement summaries tabulated for that party. Note that some of the indexed parties will be described in general for certain water agreements. For example, all persons or legal bodies of the State of Minnesota that withdraw more than 10,000 gallons of water per year.
- 2.13 Appendices. The appendices will contain (1) this scope of work and (2) any other supplemental materials that the contractor believes necessary to the purpose of this investigation, as defined here.
- 2.14 Diary. The researcher will maintain a succinctly written diary concerning the inventory activities, including inspection of all potential sources of water agreements, telephone conversations, and decisions made about inclusion of information in the inventory. The notes should document all information or actions affecting the results or summary of the inventory having significant implications for overall study progress, direction, or completion. The written diary will be complete in and of itself and not made part of either inventory volume. One photocopy of the diary, in its entirety at

that time, will be provided to the Contracting Officer at each of the four checkpoint conferences.

### 3.02 FORMAT OF PRINTED REPORTS

3.01 Typing Directions. Both volumes of the report shall be submitted on 8-1/2 by 11 inch paper. Narrative matter shall be typed double spaced for the draft and space and a half for the final. Margins shall be no less than 1 inch and no more than 1-1/4 inches at both sides and top and bottom, with page numbers in the middle of the bottom margin.

3.02 Photocopies. The photocopies of the water agreements for the second volume will be on 8-1/2 by 11 inch paper. Legal sized or other oversized originals of water agreements will be reduced to 8-1/2 by 11 inch paper. Photocopy quality should be sufficient to allow easy reading of the copied items and the text lines will run with the 8-1/2 inch dimension horizontal, wherever possible.

### 4.03 CONTRACT ADMINISTRATION

4.01 Contract Supervision. The extent and character of the work to be accomplished will be subject to the general supervision, direction, control, and approval of the contracting officer or his/her designee.

4.02 Contractor Responsibility. The contractor will furnish the labor, supplies, transportation, and equipment needed to complete this inventory and to produce the two report volumes and diary as outlined by this scope of work.

4.03 Checkpoint Meetings. Four checkpoint meetings will be held to direct study investigations and to maintain study progress. These meetings will be scheduled for the following milestones.

1. Following the development of water agreement screening criteria and sample format for data display.
2. Following completion of a draft list of potential sources (agencies and documents) of water agreement documents. This checkpoint will result in a final list of potential sources of water agreements.
3. At completion of investigation of 50 percent of the potential sources of water agreements.
4. Government will provide and discuss comments on contractor's draft two-volume report.

4.04 Time Schedule. The milestones and inventory schedule for this scope of work are as follows:

1. Receipt of executed contract	0 calendar days
2. Checkpoint Meeting 1	15 calendar days
3. Checkpoint Meeting 2	30 calendar days
4. Checkpoint Meeting 3	90 calendar days
5. Draft report submittal	150 calendar days
6. Checkpoint Meeting 4	180 calendar days
7. Submittal of final report	195 calendar days

4.05 Report Submission. The contractor will submit 5 copies each of drafts and the originals for the two-volume final report. Draft originals for the covers of the two-volume inventory will be provided by the Government at checkpoint meeting 3.



END

DATE  
FILMED

DEC.

1987